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AFTERMATH

WE are glad to restart publication of the "GAS JOURNAL," which has been held up by lack of fuel. The Minister of Fuel and Power took a great gamble when he did not take the advice either of the Electricity Industry or the Gas Industry regarding their requirements. We hope that the Minister, and we are not speaking about Mr. Shinwell in particular, will in future cease to gamble and endeavour to plan, not on paper but on stocks of fuel. We think that the community has a right to exist, and that any Government should have the prescience to help the people, for after all the Government is entirely dependent upon the people, and has no right to suggest its "power" quality unless it consults the people. We have during this winter had a very raw deal indeed, and surely we may be able to gain some sort of lesson from what we have suffered through this lack of foresight. The lesson, we feel, is that the fuel industry of this country should be considered as a composite whole, that loads should be balanced between four fuel supplying industries—to wit gas, solid smokeless fuel, oil, and electricity. It is a fact that the electricity industry cannot meet the heating demand. People are able to purchase electric appliances from any shop and plug them in. It does not follow that they will be supplied with current. Similarly, the Gas Industry must be supplied with coal if it is to meet demands made upon it. During the past 18 years we have made considerable progress. On Feb. 15, 1929, the Gas Light and Coke Company took it in its normal stride to send out 240 million cu. ft. of gas. With much bewailing, and exhortation to the consumer to exercise economy the Company sent out on Feb. 15 of this year 187 million cu. ft. of gas. We give the Gas Light and Coke Company's figures merely as an indication of what is happening throughout the gas supplying industry to-day; and it must be borne in mind that a great proportion of the gas made was produced through the medium of imported oil.

Our issue to-day is non-technical. It is essentially a news issue, containing a most important diary of what has been termed a crisis in the fuel industry. Is there going to be recurrence?

STORM-WEATHERING

THE Gas Light and Coke Company weathered the storms of 1946 with conspicuous success. The future, "were it not for the prospect of nationalization, which seems unlikely to bring any advantage to the consumers or to the proprietors" (the quotation is from Mr. Michael Milne-Watson's maiden speech as Governor), would be very bright. The Company's financial position is absolutely sound, the rebuilding of the works has begun, the supply of apparatus is improving, and the demand for gas has never been greater. In many respects the year brought disappointment. Twelve months ago there was a ray of hope that conditions would improve, but in many directions things are more difficult than ever they were. The proposed block rate method of charge, which would have had the effect of lowering the price of gas to a large number of consumers, has had to be deferred because of a steep rise in costs, the absence of any sign of stabilization, and the uncertainty of the economic future. Only a small start could be made on the £10,000,000 rebuilding programme because steel and other essential materials were in universally short supply. For similar reasons a large part of the demand for appliances could not be met, and there was, among other items, a drastic shortage of gas fire radiants.

Throughout the winter shortage of gas making plant has kept the Company on the verge of curtailment of supplies and it became necessary to reduce pressure during exceptionally cold spells. The position would have been more serious had the Company not in November increased its calorific value from 500 to 520 B.Th.U. by stopping the extraction of benzole and by the further enrichment of gas with oil. The result of this change was to sell a gas which gave more heat for an equivalent volume; no one pays more, of course, since gas is charged for on the basis of heat content. Such a measure, as the Governor pointed out, can only be a short-term palliative. If the vast and ever-increasing demand for gas is to be met the Company must have more plant.

The demand for gas was expanding throughout the year and an increase in gas output of the order of 16% over 1945 brought a higher revenue. At the present time the Company is running at an increase of 7% over the corresponding pre-war period, but the actual demand in severe weather is higher and is, in fact, more than the Company is able to meet. While it was necessary to postpone the introduction of the block rate method of charge, the Company did away with the special supplement to automatic meter consumers in the area of the late Brentford Gas Company and in certain of the outer districts. The removal of this supplement of 0.2d. per therm above the standard supplement of 2d. per therm payable elsewhere in the Company's area, brings uniformity to prepayment consumers throughout the whole area of supply. Notwithstanding the shortage of appliances, the hire purchase of cookers was resumed in the autumn.

The Company has continued its policy of research work both in gas manufacture and the development and design of appliances, and although this has cost £75,000 there is no question that it is money well spent. Considerable attention has also been paid to re-equipping returning ex-Servicemen and training new entrants, the Company having realized the importance of making service in the Company as attractive as possible. The Co-partnership scheme, established 38 years ago, has been reviewed and a new scheme has been agreed by the Directors.

The accounts presented at the 240th Ordinary General Meeting—only a few copies of which were available because of the suspension of electricity supplies to the printing trade—show a gross revenue of £21,141,882, an increase of £2,711,024 over the previous year, and a credit balance on the year's working of £3,498,726, an increase of £110,506. The lowering of the standard rate of income tax is reflected in a reduction of £207,678 to a total of £1,090,611 in the amount provided for tax in the net revenue account. In view of growing costs, further provision of £500,000 is made for maintenance and renewal of plant, and £400,000 is set aside as further provision towards the Company's commitments for pensions. Dividends are maintained at the same rate as for 1945, and the carry forward is increased by £110,052 to £1,006,310. A feature of the Fixed and Long Term Assets Account is an increase of £443,175 to a total of £1,259,253 in investments in allied undertakings.

Mr. Milne-Watson paid a well deserved tribute to Mr. A. E. Sylvester, his predecessor in office, and reviewed in detail the changes he had wrought in the administrative and financial structure of the company. He also referred fittingly to the services rendered over many years by Mr. Henry Woodall, who retired from the Deputy Governorship at the end of the year. From bottom to top, and from top to bottom, everybody in the Company has been "full out" during the past twelve months. The vote of thanks to Directors, officials, staff, and employees which followed the formal business of the meeting was never more richly deserved.

UNDERGROUND GASIFICATION

AT the 1946 convention of the Australian Gas Institute a Paper was read by Mr. Gordon Sellers on the subject of gasification of coal underground. The Paper contained a description of the now well understood methods by which this conception has been put into practice—the chamber method, the parallel gallery method, the radial borehole method and the sloping seam method—and correctly the Author came to the conclusion that "in the Russian experiments it was demonstrated quite clearly that the only results which came up to the required standard were those obtained from seams of high inclination, and economically speaking the seam had to be thin and probably unworkable by ordinary means."

There is little doubt that as a method of mining coal, underground gasification has such severe limitations that it is unlikely to be used to any considerable extent unless very much better results can be secured than have been obtained in the past. Mr. Seller's analysis of what is known up to date about the various attempts to put this conception into practice is that the chamber, the parallel gallery, and the borehole methods, all leave very large amounts of coal underground, generally in a partially carbonized condition, and in such a state that the coal which is not gasified is not recoverable. Underground gasification of a good coal seam is wasteful in coal and produces a gas of so low a calorific value that it must be used on the spot. This does not mean of course that if a good and economic system of underground gasification were discovered the coal could not be converted on the spot into electricity and used successfully in the production of power or for the production of chemicals. If, however, let us say, 50% of the coal is left underground—and that seems to be a low estimate of the losses—the efficiency of conversion of the coal into electricity would be one half of what it is in the present power station. This would obviously be an uneconomic proceeding with any good coal.

The sloping seam method is by far the most successful of those yet tried, but even by this method the conclusion that Mr. Sellers drew from an examination of the literature of the subject is that large quantities of coal are lost. Applying the method to New South Wales coals, where there are considerable areas in which the seams pitch at angles varying between 25-70°, the Author pointed out that the output per month per man is much higher than the equivalent output obtained by underground gasification by the sloping seam methods at Gorlova in Russia. He added that the coal of this seam, the Greta seam, is of such high value that "it would be a tragedy to use the wasteful underground gasification method."

In the other main coal-mining districts the coal seams are comparatively level. The strata contain numerous inferior coal seams in addition to those of high quality, and these inferior seams vary from two to forty feet in thickness and will not be worked at the present rate of extraction for many hundreds of years. It appears, therefore, to the Author that there are possibilities of using underground gasification in some of these seams, particularly as some occur near the heavy industry centres of Newcastle, Lithgow, and Port Kembla.

This general conclusion drawn by Mr. Sellers seems to be of doubtful validity. It may be true that these seams are of inferior quality, but is that any reason why they should be used now by a wasteful method when there is plenty of reasonably good coal available? Future generations will no doubt find technological methods of utilizing coal of poor quality just as we have done. During this generation there has been a progressive deterioration in the quality of coal and of its ash content. Plant has been developed for producing steam successfully and economically from these high-ash coals. Nor must it be forgotten that in some parts of the world, particularly in India, there are large coalfields in which all coals normally contain between 15% and 20% of ash engrained in the coal in such a way that it cannot be removed by any commercial method of coal cleaning. These coals are used successfully in coke ovens and the resulting coke is used in blast furnaces. The world supplies of coal may be very large, but 1,000 years is not a long time in the history of the human race. It may be that we shall discover other systems of power, including atomic energy, long before that period is at an end. We have not found these methods yet, however, and it would appear to be wrong policy to use a wasteful method of exploitation of any coal unless it would otherwise be wasted due to some peculiarity of its structure or of the method of working entailed by conditions. It may be, for example, that a very thin seam of coal sloping at an acute angle could not be mined by ordinary methods but might be "mined" by underground gasification.

The fundamental difficulty of underground gasification is that of ensuring intimate contact between the air, or combustion products first formed, and the coal, continuously and over a sufficiently long period. As the coal becomes burnt away the air will short-circuit, burning out a cigar shape hole, and the quality of the gas will decrease due to poor physical contact and diminishing temperatures. The next hole parallel to one which is burnt out will suffer from the same difficulty and considerable quantities of semi-carbonized coal will be left between these spaces. In spite of the attractiveness of avoiding underground labour and the possibility which the advocates of underground gasification have put forward of increasing the thermal output per man, it seems that no method of underground gasification, except in exceptional circumstances, can produce a material so valuable or at so low a cost as good washed coal mined by the normal method. Underground gasification appears to cost more than the normal method of mining.

The cost of producing the gas, in which there must be an item corresponding to the value of the coal or semi-coke left underground, and therefore wasted, is a very important factor. It has been made clear from the investigations undertaken on German oil-from-coal plants that these plants can only be economic if the raw materials are at a sufficiently low price. The Fischer-Tropsch process is no more economic

than the hydrogenation process and it is certainly proved that on to-day's coal prices in Great Britain petrol or other oils from coal cannot be produced at less than 2s. to 2s. 6d. a gallon as compared with imported petrol, c.i.f., at 6d. a gallon. Dr. Parker has pointed out that there are places in the world where there are very thick seams of brown coal practically on the surface from which the coal can be obtained at 3s. to 5s. a ton. Under these conditions the Fischer-Tropsch process might well be not only economic but extremely valuable. The advocates of underground gasification always point to the possibility of using the gases for chemical purposes, such as the Fischer-Tropsch process, as one of the major justifications for underground gasification. The conclusions of the B.I.O.S. teams in Germany make it clear that this would only be possible if the cost of the synthesis gas secured by underground gasification were very much less than that of the synthesized gases produced by other known methods in the more highly industrialized countries. It would not seem as though there is any possibility that such cheap synthesis gas can be secured by underground gasification. Even if the gas could be secured at an economic price by this method it would still be necessary to face the fact that we cannot afford to waste great quantities of coal by leaving them in semi-carbonized condition underground in such a state that it is impossible to recover the fuel thus wasted.

DELIVERING THE GOODS

WIDESPREAD publicity has been given to the Memorandum on "Re-Organization of the Gas Industry," submitted to the Ministry of Fuel and Power by the Association of Gas Corporations, to which extended reference was made in the "JOURNAL" of February 12. The proposals, which were put forward as a more workable alternative to nationalization, were prepared in the light of a remark by Mr. Shinwell in the House of Commons last May in these words: "I am not concerned about the term 'nationalization.' If some of the machinery that can be devised could 'deliver the goods' I am ready to consider the alternative to nationalization." The Association claims that its proposals offer an alternative which would "deliver the goods" with less dislocation and with more benefit to domestic consumers and to productive industry. They would, it is urged, provide fairer treatment for both municipal and company undertakers, and for their employees, than does the Electricity Bill.

Copies of a note on the Electricity Bill, prepared for members of the Association, have since been circulated to all gas undertakings, municipal and company, with a statement that it is understood that the Government contemplates the nationalization of the sister industries on similar lines, so far as practicable, but that the Bill for nationalizing gas will probably not be introduced before the Electricity Bill is passed. The extent to which Parliament amends the Electricity Bill may, therefore, prove important to gas undertakers. There should be a strong case for obtaining equally favourable amendments in the Gas Bill, but little prospect of success in asking for any that are more favourable. It may, therefore, be more effective in the long run to press for amendments in the Electricity Bill now, rather than in the Gas Bill later.

Points of special concern include the protection of officials and other employees, the effect of interim capital expenditure, and the new personal liabilities of directors. The compensation terms for electricity would be most unfavourable if applied to gas, particularly in the case of municipalities and sliding scale companies. The Electricity Bill contains provisions as to various things done before it is passed and (in some cases) before its publication. In case the Gas Bill does likewise, the following matters may need consideration by gas undertakers without delay: New capital expenditure; raising new share or loan capital; contracts made or varied after November 19, 1945 (particularly those affecting personal services); transactions affecting capital assets; allocations of capital and revenue items; allocations to, and use of, statutory reserve funds, &c.; rates of dividend, redemption of share or loan capital; and revision of stale standard prices.

DURABILITY OF REFRACTORIES

"THE Durability of Refractories with Special Reference to the Problem of Slag Attack," was the subject of a recent Paper by Dr. J. White, of the University of Sheffield, to the Midland Section of the Institute of Fuel. The Paper will be of interest to the gas engineer only in so far as he can relate it to his own problem, which is that of selecting a material for the construction of gas retorts and particularly of that portion of the retort which is liable to slag attack, generally the lower zone of the continuous vertical. Dr. White stressed the much greater difficulty of making such a selection than that which confronts the structural engineer in selecting his materials. The latter is generally concerned only with stresses in materials used at atmospheric temperatures or little higher, and provided he has estimated his loads correctly his test data enable him to be "fairly certain that the materials he selects will perform satisfactorily in service." But the materials composing the interior of a furnace or a retort are required to perform their functions at temperatures in which they themselves undergo physico-chemical changes and, further, they are exposed to slags and fluxes of great complexity. The relation between test data and the factors leading to ultimate failure is much more indirect.

With regard to physical data Dr. White followed the usual lines. The determination of specific gravity is of first importance in the selection of a refractory consisting mainly of silica because it indicates the degree to which conversion of quartz to tridymite has been carried in the kiln, high grade silica refractories being characterized by a low specific gravity, usually in the region of 2.35. Bulk density will be related to porosity and both will be determined largely by grading control and pressure in making. Dr. White dealt at some length with the influence of particle size in the mix. Some of his conclusions have that characteristic "indefiniteness" which one so often finds in writers on this subject—no doubt it is quite excusable. "It is generally considered," for instance, "that low porosity lowers thermal shock resistance, mainly by increasing the rigidity of the brick so that it is less able to accommodate stresses set up during temperature changes." Anyhow it is generally accepted that good quality silica as used in retorts and retort setting construction vary from 22 to 27% porosity. More, one might say, a criterion than a test datum. Permeability, being conditioned by the shape and character of the pores, shows no simple relation with porosity. And yet it, too, is a criterion of value, not only to indicate the ease with which deleterious gases may penetrate the body of the brick but also, when observed with and against the plane of pressure in making, to give warning of possible lamination, itself a source of weakness and therefore loss of durability. Tests for refractoriness and, particularly, refractoriness under load are obvious criteria of the stability of refractories in use. Spalling and after contraction or expansion were lightly touched upon. Probably they have not the immense significance in the design and operation of the steelmaker's furnace which they have in the gas engineer's retort.

A good half of the Paper was devoted to the chemical effect of slags on the durability of refractories with which they come into contact. To illustrate a very complicated subject phase diagrams were used which, we imagine, will not do much to clarify the lay mind, beautifully drawn and admirably discussed though they were.

One gets the feeling, after reading papers of this type, that our investigators are gradually pushing through an immense tangle of conflicting factors and that eventually we shall get such a clear picture of what is required in a good refractory that there will be some certainty in selection. At present we must be content with the position that the selection of refractories is "largely a matter of judgment based on past experience." The expert, knowing the working temperature and the condition of the atmosphere and the nature and quantity of the slag—in retorting practice he can seldom know this—may, after laboratory tests, "recommend one refractory—and suggest that a trial of it be made. Only when the results of a successful trial are known will he feel in a position to specify the refractory to be used." But it will not end there. It will then be the part of the manufacturer to make, and to control in the making, the refractory in bulk to the specification laid down. And after that, at any rate in the retort house, for the operation to maintain the conditions of working visualized in the data given to the "expert." And finally, the "slag" will vary from day to day according to the composition of the ash of the coal under treatment.

Gas Service Pocket Book, 1947.

We greatly regret the delay in distributing copies of the above which has been occasioned by the Fuel Crisis. Our binders now promise delivery during March, and we anticipate that all orders will be fulfilled by the middle of the month.

Personal

Mr. J. ASPINALL, Secretary of Robert Dempster & Sons, Ltd., Rose Mount Iron Works, Elland, Yorks, has been elected to the Board of Directors in place of Mr. E. W. King, who recently resigned.

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Dr. A. L. ROBERTS, B.Sc., Ph.D.(Leeds), F.R.I.C., Senior Lecturer in Refractory Materials at Leeds University, has been appointed Livesey Professor of Coal Gas and Fuel Industries, in succession to Dr. D. T. A. Townend.

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Mr. W. E. WEBB, J.P., Chairman of the British Gas Staff Association, has been appointed Chairman of the Heston, Isleworth, and Feltham Employment Committee. In 1946 there was a rearrangement within the division, necessitating the formation of a new Employment Committee embracing those areas. Mr. Webb was selected from among a list of names submitted to the Minister of Labour and National Service. He is employed by the Gas Light and Coke Company as a representative at the Hounslow office. He was a member of the Heston and Isleworth Borough Council for several years, has been Mayor of that Borough, and is a J.P. for the County of Middlesex.

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Mr. JAMES JAMIESON, whose retirement from the post of Engineer and Manager of the Edinburgh Gas Department, already announced, took effect on Feb. 15, was entertained by his colleagues in the Corporation service at the Gas Department offices, when presentations on behalf of the staff and employees were made to both Mr. and Mrs. Jamieson by Baillie West Russell, Convenor of the Gas Committee. High tribute was paid to the work of Mr. Jamieson, both during the 12 years he was Assistant Engineer and Manager and the period since 1933, when he filled the senior position. Baillie West Russell said that during Mr. Jamieson's association with the Department from 1921 to 1947 the output of gas had increased by about 120%.

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Dundee Gas Committee has appointed Mr. W. S. JOHNSTON, at present Assistant Engineer and Manager, to the post of Engineer and Manager in succession to Mr. JAMES DICKSON, who is shortly retiring. The appointment will take effect on May 16. A native of Dundee, Mr. Johnston was educated at Dundee High School and Dundee University College, where he graduated B.Sc. (Engineering). Joining the Dundee Gas Department in 1924 as an apprentice engineer, Mr. Johnston went to the drawing office in 1926 and was appointed first technical assistant in 1933. He became Assistant Engineer in June last year. During the war he held a commission in the Royal Engineers, attaining the rank of captain. He saw service with this regiment in India. For many years his father, Mr. R. S. Johnston, was Chief Clerk in the Gas Department, retiring in 1936.

Mr. H. T. SEYMOUR, A.C.I.S., Accountant to the National Gas Council from the time of its reconstitution in 1919 until the beginning of last year, when he became Chief Accountant to Whittaker Ellis, Ltd., has been appointed Hon. Secretary of the "Lest We Forget" Association, 1939, which has eight branches in Surrey and Middlesex. Mr. Seymour, who before joining the National Gas Council was with the Gas Light and Coke Company for some years, had charge of the accounts of the various Associations formed under the auspices of the Council, and is an authority on tax and rating matters.

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Mr. W. L. BOON, General Manager of the London and Counties Coke Association since its inception, and previously Technical Adviser to the London Coke Committee, has resigned to take up important duties elsewhere. The technical and commercial development of coke marketing over many years has been due in large measure to the work done personally by Mr. Boon, who, in addition to his General Managership, has represented solid smokeless fuel interests in many official and other organizations. He took a leading part in the formation of other district Coke Associations and the establishment of the National Federation of Gas Coke Associations. His technical contributions to the transactions of the Institution of Gas Engineers and other bodies have always been of a constructive character, and there is a depth of sincerity in the words "with much regret" with which the General Secretary has officially notified his resignation. Mr. Boon's successor is Mr. J. H. COOKE, Chief Technical Officer of the British Standards Institution. Mr. Cooke has been with the B.S.I. for 23 years, for the greater part of which he has been responsible for the technical work associated with standards for industrial and domestic fuel burning appliances and the fuels consumed in them.

Obituary

The death is reported of Mr. OWEN EVANS, Director, Engineer, and Manager of the Wrexham Gas Company. Mr. Evans, who was 64 years of age, had been in the service of the Company since 1899, being appointed Engineer and Manager in 1913, and a Director in 1939.

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The death has occurred at Strathmiglo, Fife, of Mr. THOMAS BUCHANAN, former Manager of the Strathmiglo Gas Company. Setting up in business as a master plumber, he was succeeded at the gasworks by his son, David. He introduced gas street lighting in the village and public halls.

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The death occurred at Lyminge on Feb. 24 of Mr. E. J. HUTCHENCE, who retired from the Gas Light and Coke Company in 1933 after nearly 20 years' service. He was born in 1873, and prior to joining the Gas Light and Coke Company in 1914 he worked in Germany as a gas engineer. He was, indeed, a fluent German scholar whose services were often sought by technical people. He joined the Gas Light and Coke Company as an Assistant Engineer at Beckton. After a short time he was transferred to Bow Common as a Resident Engineer, and still later back to Beckton as Deputy Resident Engineer. He was appointed Station Engineer at Stratford in 1926, and remained there until his retirement in September, 1933.

Letters to the Editor

Purging of Gasholders

DEAR SIR,—I read with much interest the article on "Purging of Gas Plant and Holders" in the "JOURNAL" of Feb. 5. It may perhaps be of interest to you to know that in this country we use the burnt gas of automobile motors for purging gasholders. The exhaust gas tube of an automobile motor was connected to the gasholder and the exhaust gas mixed with the gas in the holder. For medium size gasholders the quick purging was possible with a normal motor car. For larger holders bigger or more cars might have been necessary for quick purging.

Yours faithfully,
H. ZOLLIKOFER,
Secretary,
Swiss Gas and Water Association.

Zurich.
Feb. 10, 1947.

Keeping the Kitchen Fire Alight

DEAR SIR,—Many users, having very small capacity domestic coke-fired hot water boilers, desire to keep the fire burning till morning, so as (1) to have a warm kitchen to come down to; (2) to save the labour of re-kindling the fire; and (3) to economize their scant store of coke. Yet many, during these days of numerous difficulties, find this desire beyond their realization. Hence a home-made and a

successful, easy remedy will, I am sure, be interesting at this stage of universal fuel consciousness.

The difficulty of maintaining continuous slow-combustion on so small a scale is aggravated now because people, in this abnormally cold winter, wisely go to bed earlier than usual to conserve fuel, so that the kitchen fire must perforce last longer than hitherto, without attention.

The method is very simple. When stoking up the fire last thing before retiring, slip a piece of wood near the top of the cold coke (not finely chopped sticks but a small chunk of wood) and you will be surprised at its beneficial effect. The wood among the cold coke does not burn, but as it gravitates lower and lower it gradually becomes charred, so that in the early hours of the morning it reaches the zone of combustion. Simultaneously the dying fire is now almost dead, because meantime the ashes on the bars have accumulated and tend to smother the fire. Thus, just in time, the charred wood smoulders up to resuscitate the dying fire. The consequence is a warm kitchen, labour saved, and fuel economized.

The use of a small chunk of wood *each* time the fire is fed works wonders, because the fire burns always with the dampers more nearly closed; hence a saving in fuel. The idea is so very simple that all can try it, for it must be tried to be believed.

Yours faithfully,

H. J. TOOGOOD.

Hampton-on-Thames.
Feb. 12, 1947.

News in Brief

Output of Gas from the works of Shotley Bridge Gas Company was restricted for a time as the result of a fire in the gas-works. Gas users were urged to make economies in the use of supplies.

Brigg Urban District Council is considering increasing the price of gas by 6d. At present the price is 6s. 2d. per 1,000 cu.ft., and the suggested increase would affect the average household by about 2d. a week.

At a Meeting of the North London Branch of the Institute of Welding held at the South West Essex Technical College on Feb. 12, the sound film of Messrs. Babcock & Wilcox, Ltd., entitled "Steam" was introduced by Dr. Harris, B.Sc., Ph.D., D.I.C., A.R.C.S., who answered questions at the end of the film.

Darlington Town Council has decided to transfer £20,000 from the gas account to the general account for relief of the rates. In the past the policy has been that profits from the municipal undertakings should be returned to the consumers, a policy which benefited the ratepayers as a whole by saving the payment of large sums in tax on profits. The new arrangement is a direct result of the nationalization policy of the Government.

The Federation of British Industries has now published the Proceedings of its Conference on "Industry and Research," which was held in London on Mar. 27 and 28, 1946. Copies may be obtained direct from the Federation at 21, Tothill Street, London, S.W.1, or from Sir Isaac Pitman & Sons, Ltd., Parker Street, Kingsway, London, W.C.2, or through any bookseller. The cost is 10s. 6d. per copy (11s. including postage) and delegates to the Conference are entitled to a free copy.

Nationalization is Not Suitable for the Gas Industry because it must work in small units. This view was expressed by Mr. T. K. Sewell, Chairman of the Sunderland Gas Company at the annual meeting recently. Referring to the effect of nationalization of electricity, he said that at Sunderland the savings of years were going to be confiscated and he did not think the town would benefit as a result. The demand for gas was still growing and the Sunderland undertaking's output in 1946 was 14% higher than the previous year and almost 70% higher than pre-war years.

Seven Former Employees of the Cheltenham and District Gas Company, having recently retired after serving an average of 44 years with the Company, were presented by Mr. John Marshall, a Director of the Company, with Long Service Certificates in recognition of their services. The recipients were: Mr. F. Fryer, Mr. A. Moxey, Mr. W. F. Jones, Mr. E. W. Green, Mr. F. Hayward, Mr. T. Attwood, Mr. A. E. R. Ilott. In addition to receiving a Certificate, Mr. F. Fryer was presented with a gold medal to commemorate 50 years' service with the Company.

The Shortage of Gas Mantles was dealt with in the second of a series of paragraphs printed in the local press by the Hawick Gas Company on the position of the Gas Industry at present. The paragraph explained that early in the war a factory making about half of the nation's requirements was blitzed and later a flying bomb demolished the factory built to take its place. Workers went to other industries and did not return, and there has been an acute shortage of the ceramic rings which in pre-war days were imported. Consumers were urged to take off mantles and to call in the Company should a mantle require attention.

Head Wrightson & Co., Thornaby-on-Tees, announce that the River Wear Commissioners, Sunderland, have placed with them a contract for the supply and erection of a twin leaf bascule bridge to be manufactured in alumiuium alloy. This will be the first aluminium moving bridge in the world and follows a year's development work undertaken by their subsidiary company, Head Wrightson Light Alloy Structures, Ltd. When open the bridge will give a clear waterway of 90 ft. A considerable saving of steel, and therefore of fuel has been effected by the employment of aluminium. Although a small bridge has been constructed in aluminium in America, this will be the first moving bridge to be made in aluminium in the world. It is worthy of note that over 100 years ago Sunderland led the world by ordering a cast iron bridge over the Wear. The engineer to the River Wear Commissioners is Mr. W. H. F. Tripp.

Chesterfield and Mansfield Corporations have agreed to press the Ministry of Supply and the National Coal Board to put down plant at Grassmoor and Hardwick coke ovens, so that more gas can be supplied to the Chesterfield and Mansfield areas.

Kintillo, near Bridge of Earn, reputed to be Scotland's oldest village, is likely to have gas lighting soon. Perth Gas Committee has approved a proposal to lay a 6 in. main from the Post Office, Bridge of Earn, to the new housing scheme in Kintillo.

Dundee Gas Committee was informed by Mr. James Dickson, Engineer and Manager, on Feb. 17 that in spite of the weather coal deliveries were well ahead of requirements. A gradual improvement was likely to set in in the stock position. Gas delivered during the week ended on Feb. 15 reached a new peak of 56,736,000 cu.ft. Gas pressures had been reduced at off-peak periods in one district by 15%, and in the remaining four districts from 8 to 10%. A full bench of retorts, numbering 20, of the present capacity of 83, was out of use and being reconstructed to a bench of 30 retorts. Average throughput of coal per day over the five days to Feb. 15 was 396 tons, compared with the average for a fortnight of 409 tons. The 90% reduction in street lighting saved 14 tons of coal per day.

Diary

Mar. 6.—Solid Smokeless Fuels Federation: Executive Committee, Dorchester Hotel, Park Lane, 11.30 a.m.

Mar. 8.—Manchester and District Junior Gas Association: Annual Dinner, Engineers' Club, Manchester. Address by Dr. W. T. K. Braunholtz, Secretary, Institution of Gas Engineers.

Mar. 10.—Women's Gas Council: Executive Committee, 1 p.m. Housing Centre, 13, Suffolk Street, S.W.1.

Mar. 11.—Midland Junior Gas Association: "Instruments and the Pursuit of Efficiency in Gas Manufacture," E. Haden, Birmingham.

Mar. 11.—National Federation of Gas Coke Associations: Genera Committee, 10 a.m., Gas Industry House.

Mar. 11.—British Gas Council: Central Board, 2.30 p.m. Gas Industry House.

Mar. 13.—Women's Gas Council: Headquarters Members' Meeting, 2.30 p.m., Good Housekeeping Institute, 46, Grosvenor Gardens, S.W.1.

Mar. 15.—Yorkshire Junior Gas Association: "Catalytic Sulphur Removal," J. Edgar, Mirfield, and Short Paper by Mr. Dickinson, York.

Mar. 17.—London and Counties Coke Association: Finance Committee, 11 a.m.; Executive Committee, 11.30 a.m.; Central Committee, 1.30 p.m. Gas Industry House.

Mar. 19.—B.G.C. Domestic Development Committee: Technical Sub-Committee, 10 a.m., Watson House.

Mar. 19.—Manchester and District Junior Gas Association: Joint Meeting with the Institute of Fuel (Yorkshire Section) and other Associations, Sheffield. "Factors Influencing the Design, Construction, and Operation of Coke Ovens," D. T. Barritt and Dr. J. Hamilton.

Mar. 21.—London and Southern District Junior Gas Association: Reception and Dance.

Mar. 22.—London and Southern District Junior Gas Association: Convention (Technical Conference).

Mar. 22.—Midland Junior Gas Association: President's Day.

Mar. 22.—Manchester and District Junior Gas Association: Joint visit with Midland Junior Gas Association. Morning visits to British Refractories Research Laboratories and Gas-fired Pottery Works; afternoon visit to Stoke-on-Trent Gas-works.

Mar. 27.—Industrial Gas Development Committee, 10.30 a.m., Gas Industry House.

Mar. 27.—Midland Counties Coke Association: Annual General Meeting, King Edward House, Birmingham, 2.30 p.m.

April 14.—London and Counties Coke Association: Tenchnical Committee, 2.30 p.m. Gas Industry House.

London Juniors' Convention

The London and Southern District Junior Gas Association will hold its second Convention on Mar. 21 and 22. Following is a summary of the official programme, the printing of which has been very much delayed by the fuel restrictions:

MAR. 21

Reception and Dance at Caxton Hall, Westminster, at which the guest of honour will be Mr. W. K. Tate, General Manager of the Portsmouth and Gosport Gas Company. Dress, lounge suits. Tickets, 8s. 6d., including running buffet.

MAR. 22

Morning Technical Conference at Gas Industry House. After the official opening by Mr. Frank Dawson, President of the Southern Association of Gas Engineers and Managers, the following three sessions will be held:

1. Administration. "Management and Administration." Address by W. K. Tate.

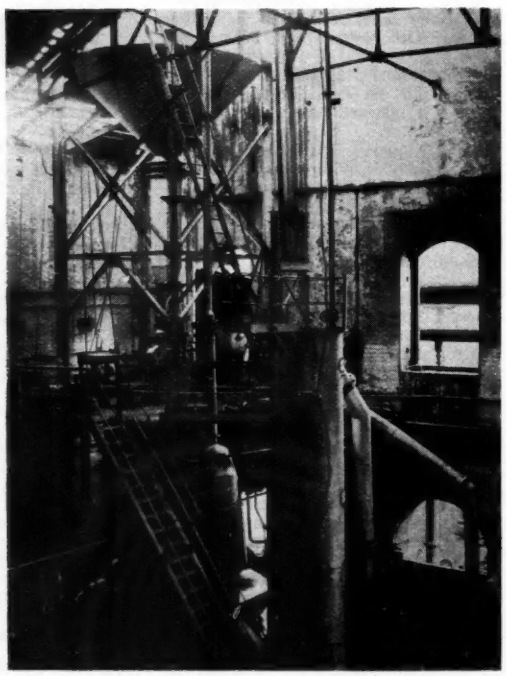
2. Production. "The Technical Basis of Works Practice," C. Stott. This Paper will deal with the function of the technologist in industry, his interest, outlook, and general training, and specialized training within the Gas Industry, the technical standards of efficiency in gas manufacture, the role of labour, and works costs as a final criterion.

3. Utilization. "Further Observations on the Provision of Heat Services in New Houses," G. C. Holliday. New standards will be briefly reviewed, with an analysis of the separate services and comparisons with other fuels, confirming the advantages of using gas and coke. Some of the technical problems involved in providing suitable equipment will also be discussed.

After the technical sessions, members will be joined by their ladies and proceed by coach to the Ardington Rooms, Clapham Junction, for luncheon. The coaches will afterwards convey the party to the Wandsworth and District Gas Company's works for an inspection. Those who wish to do so may afterwards return to Gas Industry House by coach.

Members are asked to notify their requirements to the Hon. Secretary, Mr. J. F. Gray, not later than Mar. 12.

Maintaining Supply at Liverpool



Bearing on the reason why the Liverpool Gas Company has been able during the current cold spell to maintain its pressure and meet unprecedented demands for gas is the story of how in November they heard of a 2½ million cu.ft. gas plant at Kidderminster. Immediate application was made to the Ministry of Fuel and Power to support the Company in their effort to buy the plant, with the result that within nine weeks of the first inspection at Kidderminster the plant was installed at the Linacre works in working order.

This plant manufactures producer gas and is used in conjunction with the water gas plant, saving considerable quantities of coal.

All-Night Coke Queues

Vivid reference was made in a radio news broadcast on Feb. 20 to long queues awaiting delivery of coke at Wallasey. It was stated that the queues started early in the evening before delivery was possible, and that a scheme had been introduced for giving hot drinks to cold mothers and children during their all-night wait for solid fuel.

The facts are that arrangements have been made by the Wallasey Borough Council for the introduction of a system of ticket control in connexion with the Gas Department's small coke sales service, whereby it is unnecessary for anyone to stand in a queue for a supply of coke. Tickets may be purchased at any of the depots which are at present supplying coke on Monday of each week only, commencing at 2 p.m. Only one ticket is issued to each person at a cost of 1s. 6d. and the supply of coke is available on the following Tuesday, Thursday, or Saturday morning, according to the colour of the ticket issued. When the scheme was introduced, Councillor H. M. Ellison, Chairman of the Gas and Water Committee, appealed to those taking advantage of it to assist in making it a success by procuring only one ticket for each household. The supply of coke is far below the amount required to satisfy demand, but the Committee constantly reviews the position and does its best to help those who are suffering from lack of fuel.

The fuel shortage in the residential area has been acute and for some time past long queues have developed outside the four gas service coke depots. In one place, at the gas-works, the queues began to congregate the night before the official day for supplies.

The Wallasey small coke sales service for domestic consumers has been in operation at the four depots since 1925, and during the pre-war years 1938 and 1939 quantities of 3,952 tons and 3,939 tons were collected in small quantities as compared with 2,543 tons in 1946. The present position is occasioned by shortages in deliveries of gas coal, the necessity to produce carburetted water gas and oil gas, and deliveries in house coal. The ticket system is not expected to do anything more than remove the necessity for queueing three times a week, but it does not prevent the formation of queues on Monday mornings.

The provision of hot drinks was not authorized by the Mayor of Wallasey, but was a voluntary action by a recently-elected member of the Council, which was not supported or welcomed by the Gas and Water Committee, whose members are fully aware of all the conditions and circumstances.

The story of the Councillor's "good deed" is told by the *Wallasey News* as follows: "Councillor C. H. Leggett, assisted by his brother-in-law, Mr. Neil Gordon, and their wives, have been providing hot soup this week for the people who have been queueing for hours outside the Gorsey Lane gas-works entrance to await the distribution of coke. Needless to say this kindly act has met with grateful appreciation. , In an interview, Councillor Leggett said the effort was quite a private one. He added, 'These poor people should not be here by rights, but they *will* do it, although they have been asked not to. They are going to be here all night in the cold and we thought this might help them a little. The Department has done everything in its power to ease the position, but shelter and canteen facilities formerly given to queues have had to be withdrawn because of being abused.'"

On a recent Saturday morning 1,000 people went to the Gorsey Lane gas-works and more than a quarter of them made a fruitless journey as there was sufficient coke for only 700. A petition calling on the Council to set up additional coke depots at Seacombe, New Brighton, and Wallasey Village so as to ensure a fairer distribution and avoid hardship to those living long distances from the present depots, was signed by 150 people. A local Press report says "it was impossible to approach many more than this number owing to the depth and density of the queue, which was broken only by prams and wooden trucks. Some people were too cold to sign."

Bridlington Home Service Bureau

The Home Service Bureau of the United Kingdom Gas Corporation commenced a Women's Gas Council Homecraft Course in the Demonstration Theatre of the Bridlington Gas Company on Jan. 23.

Welcoming Mrs. G. Abbott (Organizing Secretary of the Women's Gas Council) to Bridlington, Mr. F. S. Hunter, General Manager of the Bridlington Group of Gas Companies, said how fortunate it was that Mrs. Abbott had been able to come to Bridlington to open the Course and to give the first lecture, which was entitled "Planning the Home."

Films were shown to illustrate the lecture and included the British Gas Council's film of Jane Drew's Kitchen. Men also are taking an interest in the Course; out of the 60 enrolled members, five are mere males. The men were very active when question time came: they asked Mrs. Abbott many questions on Home Planning.

Further lectures in the series are: Mr. F. Brinsley, Technical Adviser to Messrs. Radiation, Ltd., on "Heating the Home." Mr. T. Taylor, of Messrs. Electrolux, Ltd., on "Keeping Food Cool." Mrs. Cambridge, Chief Dietitian to the Ministry of Food on "Nutrition," and Miss Bushnell, of Messrs. Crosfield, Gossage & Watson, on "Home Laundry."

The lectures will be supervised by Miss D. M. Inglis, resident Home Service Adviser, who is in charge of the lectures on "Cooking Craft."

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Fuel Crisis Day by Day

OWING to the national fuel emergency, publication of the "JOURNAL," in common with all other weekly periodicals, has been compulsorily suspended since the issue of Feb. 12. Events during the past three weeks have been almost exclusively concerned with the crisis, and may be summed up in diary form.

Feb. 13

The British Gas Council issued "BGC Plan A47," requesting all gas undertakings to make advance arrangements against the possibility of the Ministry of Fuel and Power requiring the discontinuance of gas supply to industrial and commercial consumers, except those conducting essential services and continuous process operations. In particular, undertakings were asked to determine which industrial and commercial consumers would be exempt, in which connexion the Ministry's statements as to those exempt from the curtailment of electricity supplies afforded useful guidance. A communique from Gas Industry House announced that if effect was to be given to the scheme, the notification would be "Operate BGC Plan A47."

Restriction on the domestic use of electricity, previously operating over half of England, was extended to the whole of the country; use of electricity in restricted hours forbidden by Order which provided for a fine of £100 and/or three months' imprisonment for infringement.

All street lighting banned, excepting where necessary for public safety or where required to enable essential work to proceed at night.

Feb. 14

Referring to "BGC Plan A47," Mr. J. R. W. Alexander, General Manager of the British Gas Council, said it was desired to avoid any widespread breakdown in gas supply owing to the hardship which would be occasioned to householders, nine-tenths of whom cooked by gas. Although the unprecedented demand for gas had not been met during the cold weather, the gas coal carbonized had increased during each of the three weeks to Feb. 7. Over 551,000 tons were carbonized in the preceding week, thus reducing the average gas-works stocks to 1.7 weeks' consumption. Stocks had since declined rapidly, owing to the sustained deterioration in the supply of gas coal, and an increasing number of undertakings were reduced to a few days' stock. The position would become increasingly serious during the ensuing fortnight and would not be remedied for some weeks after the end of the cold spell.

Feb. 15

Ministry of Fuel and Power announced that the national effort to keep the power stations going was bringing the first definite results. Success was still a long way off, and would not be attained without the continued co-operation of all consumers, transport workers, and the mining community. Coal stocks as gas-works in London had declined heavily during the past week and now stood at nine days' supply, compared with 10½ days the previous week.

Mr. Alexander said that if curtailment of gas supplies came about it would be done by industrial consumers turning off their supplies in active co-operation with gas undertakings. The Industry had in mind a list of essential and non-essential industries on the lines of that prepared for the electricity restrictions. Some gas undertakings had only three, four, and five days' stocks of coal in hand. Those in particularly low water were mainly in London.

Feb. 16

Mr. Alexander announced that gas undertakings, with few exceptions, hoped to maintain a reasonable supply of gas during the Sunday mid-day cooking period, provided consumers were economical.

The Ministry of Fuel and Power warned housewives not to switch on electric fires and electric cookers at the same time; if they did, the heavy demand might force the power stations to cut off supplies.

It was reported that there had been a progressive reduction in the consumption of current at Birmingham during the week from 47 to 60%, and there was a coal saving of over 50%. Similarly gas consumption receded from the normal 90 million cu.ft. in cold weather to between 60 and 70 million cu.ft.

Feb. 17

Power stations had 10½ days' supply of coal, but there were no immediate prospects of any large scale lifting of restrictions. The Government was reported to be working out plans and considering measures for long-term restrictions on the use of electricity until new power stations were built and new equipment was provided.

Stocks of coal at gas-works in London amounted to 212,000 tons, equivalent to 9.6 days' supply, compared with 191,000 tons, or nine days' supply, four days earlier, and 231,000 tons, or 10½ days' supply, on Feb. 7.

The total coal savings for the first six days of the cut were put at 182,130 tons. The position of newspapers and periodicals in the emergency was clarified. No weekly, fortnightly, monthly, or quarterly periodicals were to be published in the restricted period which would run at least to Mar. 1, and duplicated substitutes for suspended publications were banned. The arrangements applied irrespective of whether the publications were distributed in this country or overseas, or what type of power was used for their production.

It was reported that coal saved by gas undertakings during the week ranged from 10 to 33% of the previous week's consumption, the average being about 15%. Six weeks' stock at all gas-works before the start of next winter was said to be the aim of the Industry.

Feb. 18

Sir Guy Nott-Bower, Deputy Secretary of the Ministry of Fuel and Power, hinted at the possibility of a long-term scheme for restrictions on the use of both gas and electricity. The gas coal stock position in London improved to an average of 9.7 days' supply. A further lowering of pressures, except in isolated instances, was said to be unlikely; subject to weather conditions and coal supplies a slight improvement was considered possible. The closing down of industries which normally use gas as well as electricity had resulted in a saving in excess of the additional amount of gas used domestically to compensate for the electricity cuts.

Feb. 19

At a Press conference at the Ministry of Fuel and Power it was reported that the gas position was "not too good." Continued need for the utmost economy in the domestic use of gas was emphasized, London being described as "the greyest part of the picture." There was a temporary shortage of coke, and during the week ended Feb. 14 coal stocks at gas undertakings had dropped from 915,000 to 852,000 tons. The co-operation of gas consumers was "not good."

Feb. 20

It was announced that electricity supplies for industry would be resumed in the Midland area from Feb. 24. Domestic restrictions would be continued. It was not yet possible to indicate a possible date for the resumption of industrial supplies in other areas.

Gas coal stocks in London were put at 10.1 days' supply; the position was "still not satisfactory," but there was no immediate question of compulsory restrictions.

The *South Eastern Gazette*, commenting editorially on fuel cut incidents, said it expected to find the Rochester, Chatham, and Gillingham Gas Company's showrooms glorying in a blaze of gas-lit splendour. "But it was not so. Their premises were dark and forbidding as all the rest. It was heartening to see such a fine example of voluntary self-sacrifice in the national emergency." The fact was that the Company felt it would be most unfair from a national point of view to make capital out of the electricity cuts and instructions were given that only the minimum lighting should be permitted in the showrooms and offices.

Mr. Alexander, in a letter to *The Times*, corrected a false impression that reduced gas pressures involved a lowering of the heat content of the gas with the result that the consumer was called on to pay for what he did not receive. "The consumer," he wrote, "pays only for the heat units consumed."

Feb. 21

Coal stocks at power stations reached about 14½ days' supply, but further deliveries were threatened by the weather. London's eight main power stations had stocks for 12 days. Gas coal stocks were said to have fallen slightly, and domestic consumers were again asked to use less gas.

The Ministry of Fuel and Power issued a request to all gas undertakings to reduce over the whole ten weeks period Feb. 22 to May 2, inclusive, the amount of coal carbonized to an amount not more than 90% of the actual tonnage carbonized during the period Nov. 30 to Feb. 14, inclusive (omitting Christmas week ended Dec. 27), *i.e.*, a net ten weeks period.

Commenting on this directive, Mr. Alexander said a 10% reduction in coal carbonized did not necessarily involve a corresponding reduction in gas pressure. Co-operating consumers would have the satisfaction of knowing that gas coal saved would help to build up the coal stocks on gas-works against any deterioration in the coal supply position and would help towards such stocks being raised to a satisfactory level before next winter. At least six weeks' stocks would then normally be held, but at present the average stock did not exceed 11 days' consumption. It was appreciably less in some undertakings, being lowest in London and highest in the Northern Region. Should the demand for gas exceed the quantity which an undertaking was permitted by the Ministry to make, reductions of pressure would be inevitable, and since the gas main could not discriminate between consumers, all might suffer.

On the same day it was announced from Gas Industry House that in addition to reducing, as directed by the Government, the quantity of coal carbonized, a special drive was being made by gas undertakings to conserve coal by extending yet further the use of oil for gas making purposes. More than 4½ million tons of coal were conserved in this way last year, which is over double the saving of five years ago. A disadvantage of this expedient, however, is that, for every ton of coal saved by making part of the gas from oil, at least half a ton of coke is denied to consumers of solid fuel, the demand for which is con-

siderably in excess of the quantites made available. Last year the Gas Industry carbonized nearly 23 million tons of coal, while the consumption at this time of the year is of the order of 525,000 tons weekly. During the critical days of the first half of February, over 450,000 tons of coal were delivered weekly to gas undertakings. The balance, however, had to be drawn from inadequate stocks of coal, which must be replenished. Another factor in solving the fuel problem was that gas-works plant must be repaired and extended. This was compulsorily restricted during the war and, since its end, sufficient labour and material had not been made available to carry out the highly skilled work involved. Gas consumption since before the war has increased by 30% to domestic consumers and by 70% to industrial and commercial users. Excessive requirements at periods of peak demand sometimes cannot be met by undertakings having a shortage of plant, however much coal may be available.

Feb. 22

The Ministry of Fuel and Power issued the following statement: "The position of coal stocks at gas-works is rapidly becoming critical. For some time these stocks have been too low for safety, and the long spell of hard weather has made it difficult to build them up. The recent return of blizzard conditions in the Northern and Eastern areas has greatly intensified these difficulties. Coal transport by road, rail, and sea is again being paralyzed by snow drifts, ice, and heavy gales, in spite of the magnificent work that has been, and is being, done to get the coal through. The position now is that it may be necessary, within a day or two, to extend to gas the special crisis restrictions which are still in force for domestic and non-industrial consumers of electricity. The Ministry of Fuel and Power therefore asks all users of gas to exercise the utmost possible economy during the next forty-eight hours. Upon the extent of these economies may depend the decision whether or not to impose the electricity restrictions on gas also."

Mr. Alexander declared that this warning had come as a surprise to gas undertakings. The British Gas Council had been in constant consultation with the Ministry throughout the emergency but had no previous knowledge of the statement. In view of the possibility of curtailment of supplies the Council again stressed the need for economy.

Feb. 23

Coal stocks at London gas-works rose from 223,000 to 225,000 tons, equal to about 10.2 days' supply. The overall position at gas-works was 11 days' supply. The British Gas Council stated that the cutting off of gas for certain non-essential industrial users was not immediately contemplated by any undertaking. Certain London and provincial undertakings announced that they hoped to maintain satisfactory supplies. It was anticipated that the restoration of industrial activity in the Midlands would increase demands for gas in that area, and a Ministry of Fuel and Power announcement emphasized that the domestic consumer had a most important contribution to make to the restriction of consumption to the lowest possible level.

Feb. 24

It was stated that in London on Sunday (Feb. 23) stocks of gas coal fell from 225,000 to 224,000 tons, but that in general the stock position had been unvaried since Feb. 19. Between 12 and 1 o'clock on Feb. 23, the Gas Light and Coke Company supplied 21,500,000 cu.ft., compared with a supply during the same hour on Feb. 2 (before the fuel cuts) of 22,700,000 cu.ft., which was the highest output recorded since the foundation of the Company in 1812. Consumption in Birmingham on Saturday and Sunday also showed a substantial increase, compared even with last year.

Mr. Alexander replied to a statement by Mr. Attlee in the House of Commons that the Chairman of the British Gas Council was present when the Ministry of Fuel and Power issued its warning that gas supplies might have to be restricted. He said he himself attended the Ministry conference where the warning was given, but the Chairman of the Council, Col. H. C. Smith, was not present. The Council was not consulted in any way, and the statement took everybody by surprise. Immediately afterwards he saw the Permanent Secretary, the Parliamentary Secretary, and other senior officials of the Ministry of Fuel and Power. Mr. Alexander protested at the absence of consultation on such a vital issue, and said that no sudden deterioration in the gas supply position had taken place as far as the British Gas Council was aware which justified the statement.

Sir Guy Nott-Bower, Deputy Secretary of the Ministry of Fuel and Power, referring to the Ministry's warning of the possibility of restrictions on gas consumption, said the position was that the worst forebodings about the weather and its effect on transport had not been realized. There was a good deal of sun during the week-end and a large number of ships got away from the north-east coast ports. The position was being watched from day to day.

Giving statistics as to stock position and coal carbonized at a Ministry conference, Mr. Alexander expressed the opinion that there was no crisis in the stock position of gas coal. Sir Guy Nott-Bower replied that there was a constant push and pull between gas and electricity undertakings and until an overall rationing scheme had been worked out both services had to be viewed together.

Feb. 25

Coal stocks at gas-works were reported to have increased in the week ended Feb. 21 to an average of 1.8 weeks' supplies over the whole country compared with 1.6 weeks' supplies at the end of the previous week. Stocks of gas coal in London were, however, below the general average and on the morning of Feb. 25 totalled 1.5 weeks' supply.

Mr. Alexander said at the daily Ministry of Fuel and Power conference that the Gas Industry were developing the manufacture of gas from oil, a process which last year had saved 4,500,000 tons of coal.

Feb. 26

Sir Stafford Cripps said in the House of Commons that the gas position was a very serious one. Since the middle of January the total allocation of coal to the Gas Industry had been at the rate of 500,000 tons a week; and consumption from the middle of January to Feb. 8 was round about 500,000-550,000 tons a week. The result was that stocks were drawn upon. At Feb. 8 the stocks amounted to 915,000 tons, or 1.72 weeks' supply. The week following, when the steamers could not come down from the north-east coast, stocks fell to 850,000 tons; in the next week they recovered to 934,000 tons, or 1.75 weeks' supply. That was the occasion on which 40,000 tons were taken from house coal in order to work up the stocks of gas undertakings. The position therefore was precarious as regards gas at the present time, particularly as these stocks again were not evenly distributed.

There was need for the utmost economy as regards the use of gas. It might be—though it was not in immediate contemplation—that some measures would have to be taken in regard to gas such as had been taken in regard to electricity. It was essential that economy should be exercised. They hoped that with the fall of space heating directly the weather became a little warmer and the days a little longer, they might be able to carry the Gas Industry without further trouble. This was a desperately difficult job. There was no need for people to be unduly depressed by it. It was a very difficult situation. It had been critical, but it was not so critical as it was. However, as long as the present weather disturbances lasted it must remain critical.

It seemed to him certain that they would have to adopt some form of limitation or rationing for domestic users of gas and electricity during the coming year. Until they could decide on that they would have to maintain the present cuts, because they could not afford to release them until they had some alternative method if they were going to let industry have any reasonable quantity of supply.

Feb. 28

Announced that electric power would be restored to industry in London and the South East on Mar. 3, the same day as the North West area. Restrictions on the use of electricity by domestic and and non-industrial consumers, such as shops, offices, hotels, and entertainments, to remain in force. The announcement said there was still great need for economy in the use of gas and electricity. Satisfactory progress in the movement of coal was reported.

Mar. 1

Coal stocks at power stations generally averaged 16.8 days' supply, and at the eight main London stations about 14 days'. At London gas-works there was 229,000 tons, sufficient for 10.4 days, compared with 12 days' supply for the whole country on Feb. 21.

1947 "Journal" Directory

In order to keep the Directory information up to date, the following alterations and corrections which have been notified during the past month should be noted in the 1947 issue of the "JOURNAL" Calendar and Directory:

Page 28.—EASTBOURNE.—Office address, 85, Terminus Road.
" 32.—GAS LIGHT AND COKE COMPANY.—W. K. Hutchison, *D. and M.D.*
" 66.—BURNTISLAND.—J. Webster, *E. and M.*, vice D. Marshall.
" 88.—SHIPLEY.—H. B. J. Hart, *E. ond M.*, vice H. Burton retired.

Tees Industrial Development Board at Middlesbrough met recently to discuss gas supplies. A letter was read from Redcar Corporation on future gas developments, but it was thought that these would not be sufficient to meet both domestic and industrial needs. It was decided, therefore, to ask the Redcar Gas Engineer and Manager to discuss the matter further with the Board. It was reported that Stockton Gas Department would supply the North Tees Trading Estate, while Middlesbrough Gas Department would supply the East Middlesbrough Trading Estate. It was agreed that the views of the Ministry of Fuel should be obtained before any further heavy expenditure on gas developments was incurred.

The Gas Industry *vis à vis* the Coke Oven Industry

[From a Special Correspondent]

(*Continued from p. 367—issue of Feb 12.*)

IN the 1945 Statistical Digest of the Ministry of Fuel and Power the average monthly number of ovens in operation is given as 5,165. Of these, about 24% were compound regenerative ovens, 50% were regenerative, 21% were waste heat, and 5% were Beehive ovens. It will be seen that a total of 74% of the coke ovens in operation are built to transfer sensible heat in the waste gases to the air or air and heating gas used for the carbonization of the coal.

In the regenerative ovens, the waste gases leaving the heating flues are passed through large regenerator blocks built below the ovens in which they impart their heat to the brickwork filling. The capacity of the generators is such that the gases are cooled from about 1,100°C. to about 260°C. These waste gases are passed through one half of the total regenerator capacity provided, the other half in operation heating the air used in combustion of the fuel gas. At the 20 to 30 minute intervals when the flow of gas in the oven flues is reversed the flow of gas in the regenerators is also reversed as regenerator on waste gas being changed over to heating the air and *vice versa*. The whole change-over operation is automatic throughout the length of an oven battery, being regulated through brickwork to all reversing valves by a time-operated mechanism. The principles involved in the design and application of brickwork regenerators have recently been dealt with by Finlayson and Taylor[5] in a contribution to the series of papers on "Waste Heat Recovery."

Heating of Ovens

A common feature of regenerative ovens is the provision whereby they may be heated either by coal gas or by leaner types of gas such as that from blast furnaces and mechanically-operated external producers. When heated by the former the regeneration of heat is solely between waste gas and air, the gas being supplied to the heating flues directly from a main below the regenerator blocks, each supply pipe being independently controllable. It may, however, be found more expedient to use a low calorific value gas for heating the ovens, in view of the fact that a steelworks closely integrated with the ovens can supply blast furnace gas and make better use of the coal gas from the ovens. In these circumstances, both the air and the blast furnace gas are heated by regeneration of the heat in the waste gases, due provision being made for these gases to pass separately through the appropriate regenerator blocks. Thus in the compound regenerative oven carbonization can be brought about either by means of high or low calorific value gases and the regenerators are so arranged that the appropriate pre-heating of the air and of the gas, if required, can be obtained as desired.

In the waste heat oven none of the sensible heat in the waste gases leaving the heating flues is returned to the ovens as sensible heat in the air or air and gas used for carbonization. It is utilized to raise steam for process requirements in waste heat boilers which the gas leaves at a temperature of about 240°C.

A Comparison

In comparing the carbonization units of the gas and coke oven industries, some mention should be made of the thermal balances and efficiencies of gas production obtainable in the various systems. Typical results of good practice are given in Table 2. It may be noted that the fuel consumption of coke ovens fired by producer gas generated in mechanically operated external producers is less than that of any other system. When, however, consideration is given to the fact that an efficient system of waste heat regeneration is necessary with this type of plant, whereas continuous vertical retorts are operated without heat regeneration and little or no recuperation, the latter type of setting compares remarkably well. Moreover, if plant for raising steam is installed to recover the heat available in the waste gases from horizontal and vertical retorts or that recoverable from external producers, the heat obtained as steam reduces the gross fuel consumptions by a marked extent. The net result is that the fuel expenditure for continuous vertical retorts becomes less than that for coke ovens. It should be borne in mind, however, that a proportion of the steam generated in waste heat boilers is absorbed in driving waste gas fans, feed pumps, &c., and is not available for plant use.

[5] "GAS JOURNAL," Jan. 9, 1946.

TABLE 2

	Horizontal retorts recuperative (6)	Horizontal retorts non-recuperative (7)	Continuous vertical retorts (10% steaming) (6)	Continuous vertical retorts (slight steaming) (8)	Intermittent vertical chambers (retorts) (8)	Intermittent vertical chambers (retorts) (9)	Coke ovens (producer gas fired) (8)
Yields of products :							
Gas, therms per ton	73.9	—	78.0	76.2	82.0	78.6	75.9
Coke and breeze, dry cwt. per ton ...	11.7	—	11.5	—	—	11.3	—
Tar, dry gall. per ton ...	9.4	—	10.0	11.0	13.0	13.4	9.0
Thermal balance of carbonization :							
Input — Therms per ton of coal—							
Coke to producer	40.0	43.7	36.7	33.4	38.0	37.7	32.0
Output — Therms per ton of coal—							
Sensible heat in crude gas and tar	5.7		5.0	3.5	6.2	4.3	6.1
Sensible heat in coke and breeze ...	8.5	17.3	2.0	6.0	10.7	9.5	11.3
Heat lost in producer operation	4.2		4.0	4.2	14.5	2.9	7.5*
Total heat in waste gas ...	14.6	19.6	19.2	15.1		13.8	4.0
Heat consumed in gas making	—	—	1.6	—	1.0	1.0	—
Heat lost by radiation and convection from setting, &c.	7.0	6.8	4.9	4.6	5.6	6.2	3.1
	40.0	43.7	36.7	33.4	38.0	37.7	32.0
Heat recovered from waste gas as steam, therms per ton of coal ...	9.1	13.3	14.0	—	—	4.9	Nil*
Fuel consumption, therms per therm of gas made ...	0.54	—	0.47	0.44	0.46	0.48	0.42
Efficiency of gas production (retort plant only), % ...	62	—	65	66	65	64	67

The computation of fuel consumptions on the basis of coal carbonized does not afford a means of readily appreciating fuel expenditure in obtaining high gas yields. Thus, if a gas of 475 to 500 B.Th.U. per cu. ft. is to be sent out, the richer gas obtained from coke ovens or horizontal retorts requires suitable dilution, and if this is performed by the use of carburetted or blue water gas an additional expenditure in fuel is incurred. It can be seen from Table 2 that the gross fuel expenditure of continuous verticals, in which the production of dilution gas takes place in the retort, may be almost as low as that of any other system of carbonization when expressed on a thermal basis.

These considerations are mainly applicable to the Gas Industry when comparing the various systems of carbonization. In the coke oven industry the aim is the maximum production of coke suitable for a particular market and such coke is not obtainable usually from the accepted carbonization units of the Gas Industry. In general, coke oven plants are seldom fired with producer gas.

* Part recoverable as steam raised in annular boilers of producers.

(6) F. M. Birks, Trans. Inst. Mech. Eng., 1934, 127, 5.
(7) J. G. King, J. Inst. Fuel, 1946, April.
(8) S. Pexton, GAS JOURNAL, Vol. 240, 91; Vol. 241, 20.
(9) F. J. Dent, Trans. Inst. Gas Eng., 1932-3, 82, 638.

COMPANY MEETINGS

Gas Light and Coke Company

The Two Hundred and Fortieth Ordinary General Meeting of the Proprietors of the Gas Light and Coke Company was held on Feb. 20, 1947, at Gas Industry House, London, S.W.1. The Governor, Mr. Michael Milne-Watson, presided.

The SECRETARY (Mr. Brian Wood) read the notice convening the meeting, and the Corporate Seal of the Company was affixed to the Register of holders of Capital Stock.

The GOVERNOR : Ladies and Gentlemen,—The Report and Accounts of the Company for 1946 are in your hands, and I assume you will, as usual, take them as read.

Before dealing with the affairs of the Company generally, I should like to refer to the great loss that we have suffered in the retirement of Mr. A. E. Sylvester from the Governorship. Some 15 years ago, when he was a partner in a well-known firm of Chartered Accountants, he was called in to advise on the organization of the Rental Department. After two years' work on the problems of this and other Departments he was asked to join the staff of the Company, which he did in the capacity of Comptroller, becoming General Manager in 1941. He was appointed a Managing Director in 1942, and was elected Governor of the Company in 1945.

One may divide Mr. Sylvester's work for the Company into two parts. First, the modernization of business methods which was made necessary by the great increase in the Company's area of supply and the number of consumers following the amalgamations that took place during the 12 years after the 1914-18 war. Until 1938 the control of gas sales and service had been centralized at Chief Office, where there had grown up a somewhat cumbersome and overburdened organization. Now, as a result of Mr. Sylvester's work, the commercial side of the Company is made up of six geographical Divisions, which as far as possible run as autonomous units since the Divisional Managers are exected to take decisions on their own initiative within the scope of policy laid down by the Directors. In this way we strive to cultivate that individual attention to consumers' needs which is not always associated with large undertakings. As part of this great re-organization, the Company's business methods generally were reviewed and brought up to date with the minimum of internal disturbance. On the gas production side a similar devolution of authority has taken place by the setting up of four groups of gas making stations, each under a Group Engineer, responsible to the Chief Engineer.

A logical consequence of the rearrangement of the operational side of the Company was to put into practice Mr. Sylvester's conception of management at the highest level which involved the appointment of Controllers to take charge of groups of allied Departments or of sections of the Company's activities, the Controllers being in turn responsible to your Managing Directors whom they meet daily. In this way the employee on the district or in the retort house is in the direct line of authority which flows from the management at Chief Office, whilst at the same time every encouragement is given for the exercise of individual initiative at different levels of responsibility.

The other, and no less important, aspect of Mr. Sylvester's work concerns the financial side of the business, and it goes to the very foundations of the Company's structure. He arranged that the Company should meet demands for expenditure on maintenance and renewals of plant and buildings by setting up equalization funds to which contributions, based on experience of the annual average requirements, are made each year out of revenue so as to obviate the uneven charges which would otherwise inevitably arise. The value of this arrangement has been proved because, although expenditure was severely restricted during the war years, the contributions were maintained and substantial funds built up; with heavy commitments in front of us we are feeling the benefit of his foresight.

Lastly, I would add that, although so much of Mr. Sylvester's time was necessarily taken up with organization and finance, he never forgot the human side; he has always had the interests of the employees at heart since he believes that good working conditions in the widest sense are fundamental to any organization. I hope I have said enough to remind you of just a few of the great benefits for which he has been responsible in this Company. It will be a great comfort to everyone to know that although he has given up the Governorship he remains a Director and will be constantly available for consultation.

I also want to pay a tribute to Mr. Henry Woodall, who resigned his Directorship and with it his office of Deputy Governor at the end of last year. Mr. Woodall had been a Director of the Company since 1913 and Deputy Governor since 1926 and is well known to you all for the very great service he has performed for the Gas Industry. There are probably few men alive so experienced in every aspect of its working. His resignation, which followed a long period of ill-health, will be a great loss to the Company.

In June the Directors elected Major The Hon. Gwilym Lloyd George, P.C., M.P., to fill a vacancy at the Court. He is well known to you and his knowledge of men and affairs and, in particular, the wide experience of the fuel industry which he gained as Minister of Fuel and Power during the war, are of the greatest value to the Company. He will submit himself to the Proprietors later in the meeting for re-election.

To fill another vacancy the Directors have recently elected Mr. W. K. Hutchison as a Director and have appointed him a Managing Director. Mr. Hutchison joined the Company as a Chemist in 1926. During the recent war he was loaned to the Air Ministry, where he became Director of Hydrogen Production and later Director of Compressed Gases and was responsible for the production of hydrogen for barrage balloons and oxygen and other gases used by the Royal Air Force. On his return to this Company he became Controller of Coke and By-products, for which, among other matters, he will continue to be responsible. Mr. Hutchison will also submit himself for election by the Proprietors.

I will now refer you to the Accounts for the year 1946, copies of which are in your hands and in passing I would say how sorry we are that owing to present-day restrictions we could not let you have them earlier.

These Accounts, as is customary in the Gas Industry, are set out in considerable detail and very largely speak for themselves. But I will comment briefly on the salient points.

The statements of Stock and Loan Capital (Nos. 1 and 2) and the Issued Capital Account (No. 3) show no change from the previous position; No. 4 gives details of the accumulated expenditure on Fixed and Long Term Assets. The principal item of additional expenditure during the year is a further investment in Allied Undertakings. The new expenditure on such things as meters and appliances is seriously limited by the shortage of supply in such articles, which I shall mention again later. Certain items are depreciated on a regular system and the net balance of the account shows an increase on the year of some £776,000.

The Revenue Account shows a number of substantial changes as between 1946 and the previous year, and I think it will be simpler if, instead of commenting on each item in order I give you the main reasons which account for the various differences.

These reasons are :

(i) An increase in gas output of the order of 16% (compared with 1945). This naturally brings a higher revenue of approximately the same proportion.

(ii) Increases in such items of expenditure as are inevitably affected by greater output, raw materials, wages and so forth.

(iii) Increases in expenditure not directly related to increased output. These cover increases in rates of salaries and wages and, in addition, the re-employment of large numbers of men and women returned from the Forces.

The result of all the changes is that the credit balance on the year's working shows a net increase of £110,000, and this balance (£3,498,726) is carried to the next account.

No. 6 is the Net Revenue Account and it shows how the year's balance, together with the amount brought forward from the preceding year, is disposed of.

It will be observed that income tax is less. This is partly the result of the reduction of tax from 10s. to 9s. in the £, but the Net Dividends shown lower in the account are correspondingly increased.

There are two special allocations. First, in view of the ever-growing cost of replacing and modernizing plant, it is thought necessary to provide an additional sum of £500,000. And second a sum of £400,000 is set aside as a further provision towards the Company's commitments for pensions.

You will note that this leaves us with an increase in the carry-foward which in the circumstances is a desirable result to have achieved. I need not comment on Accounts Nos. 7, 8 and 9 as these are self-explanatory.

The Balance Sheet (Account No. 10) reflects the policy of my predecessor, who throughout the war held the view that it was not enough merely to weather the storm, but that we must be prepared to face with an unassailable financial position the growing competition that peace would bring. Whatever the future may hold, we can feel proud—if and when we are nationalized—that we shall be able to hand over the Company in first-class order, both financially and as a working organization.

Turning to the working of the Company during the past year I am pleased to have to report a continued increase in the sales of gas which were over 5% above the pre-war output of 1938. It is, however, important to note that throughout 1946 the demand was expanding and at the present time we are running at an increase of 7% over the corresponding pre-war period. This, from a business point of view is satisfactory, but the actual demand in severe weather is higher and is, in fact, more than we are able to meet. The main reason for this is that our plant has not yet recovered from the war years when it suffered not only extensive war damage but the inevitable postponement of normal maintenance.

We are, of course, aware that a proportion of this increased consumption may be because many of our consumers have been unable to obtain sufficient quantities of solid fuel for heating purposes, but the fact remains that having once been initiated into the advantages of gas as a clean and easily controlled heating medium it is quite certain that many of them will not return to the use of cruder fuels. This is

borne out by the fact that were the apparatus only available we should, at the present time, be able to surpass even the peak sales of 1937-38.

Shortage of gas making plant has throughout the winter kept us on the verge of curtailment of supplies and it became necessary to reduce pressure during exceptionally cold spells. The position would, however, have been much more serious had we not in November increased our calorific value from 500 to 520 B.Th.U., by stopping the extraction of benzole and by the further enrichment of gas with oil. Briefly, the result of this change is to sell a gas which gives more heat for an equivalent volume. No one pays more, of course, since gas is charged for on the basis of heat content.

Such a measure can only be a short-term palliative. If we are to meet the vast and ever-increasing demand for gas we must have more plant. Had it not been for the war we should have been expanding evenly throughout the last seven years but as it is we are now faced with a huge re-building programme at a time when steel and other essential materials are in universally short supply. The programme, which entails the expenditure of some £10,000,000, is progressing all too slowly, but I should like to take this opportunity of thanking our patron Ministry, the Ministry of Fuel and Power, for their continual assistance in pressing our claims with the appropriate supply Ministries.

We have continued our policy of research work in both gas manufacture and the development and design of appliances, and although this has cost us some £75,000 there is no question that it is money well spent for it is only by looking ahead that we can be assured of continued successful competition with other fuels.

As forecast in Mr. Sylvester's address to the Proprietors last year, it was our intention to introduce a block rate method of charge which would have had the effect of reducing the price of gas to a very large number of our consumers. To give the Company the necessary statutory powers we obtained an Act of Parliament in July. It is, of course, a permissive Act, and since by then costs had begun to rise steeply we regretfully decided, after very full consideration, not to apply its provisions for the time being. There is no immediate sign of stabilization and it would have been unsound policy to reduce the price of gas when the economic future was so uncertain. Our aim, for the present, is therefore to keep the price of gas where it is.

We felt it right, however, to do away with the special supplement to automatic meter consumers in the area of the late Brentford Gas Company as well as in certain of our outer districts. The removal of this supplement, amounting to .2d. per therm over and above the standard supplement of 2d. per therm payable elsewhere in the Company's area, will bring uniformity to automatic consumers throughout the whole area of supply.

Business development from the point of view of the hire and sale of appliances has, of course, been limited by the available supply of such things as cookers, water-heaters, and fires. There is a great deal of lee-way to make up and it is our policy as soon as we can obtain the appliances from the makers, to continue to make available on reasonable terms the most modern gas-burning apparatus. As a first stage, I am glad to be able to report that we resumed hire-purchase of cookers in the autumn of last year.

Thanks to the return of the majority of our fitters from active service we have been able this winter to resume our regular inspection of appliances, but we are severely handicapped at the present time by the shortage of appliance parts, particularly radiants for fires.

Turning now to the Company's employees, of the 8,000 who left the Company to serve in H.M. Forces and industry only about 1,000 have still to return and I think that it speaks well for this Company's labour relations that the number who have decided not to resume work with the Company after their return is very small. To assist ex-Servicemen to find their feet once more in their civilian employment, we have where necessary instituted refresher courses, which I believe have done much to help them over the difficult transitional period. At the same time, the trainee schemes, which were always a feature in this Company, have been resumed, both for those who remained with the Company during the war and for those who have completed refresher courses after rejoining. The intention is to bring the men up to date technically and to help them to achieve promotion. We have to face in the future an increasing shortage of young entry into the Company due to the raising of the school-leaving age as well as the application of the new National Service Acts, and it is of great importance that service with the Company should be made as attractive as possible. With this in mind, we have during the last year instituted a scholarship for the most promising juvenile of the year and are intending to start once again the Staff Pupilship scheme open to both secondary schoolboys and senior apprentices.

During the year the Co-partnership scheme, established in 1909, has, with the co-operation of the Co-partnership Committee, been reviewed and a new scheme has been agreed by the Directors. This, we hope, is more up to date, and will help to emphasize to all Co-partners, as stockholders, their responsibility for, and interest in, the prosperity of the Company.

In conclusion, I should like to take this opportunity of thanking the employees generally for their loyalty and hard work throughout last year. It has been a year of exceptional difficulties. On the works we have had to contend with constant breakdowns of plant and shortages of materials as an aftermath of the war, while on the district our representatives have had the unenviable task of explaining to the public that we cannot supply them with the gas apparatus for which there is so great a demand. The future, however, were it not for the prospect of nationalization, which seems unlikely to bring any advantage to the consumers of the Gas Light and Coke Company or to the Proprietors, would be very bright. Our financial position is absolutely sound, the rebuilding of the works has begun, the supply of apparatus is improving, and the demand for gas has never been greater. I now have pleasure in moving:

"That this meeting do agree with and confirm the Report of the Directors and the Auditors' Report and Statement of Accounts of the Company for the year ending on Dec. 31."

The DEPUTY GOVERNOR (Mr. F. M. Birks): I have pleasure in seconding this proposal.

The GOVERNOR: Before putting that motion to the meeting I shall be happy to hear any comments that Proprietors may wish to make, and I will endeavour to answer any questions they may wish to ask.

A PROPRIETOR: Why could you not have sent the Report and Accounts to the Stockholders earlier? We should have them at least six days before the meeting.

The GOVERNOR: Nobody can regret more than we do that it was not possible to send them out before. I do not think there is any provision in the Company's Acts that we have to send them out six days before the meeting. The point on this occasion was that we could not get permission to use the electricity necessary in the power machines for printing these accounts. We went to the Ministry of Fuel and Power and we pointed out the difficulty we were in, and we asked them to obtain for us from the Board of Trade a special licence to use the electricity necessary to print these accounts. That licence was refused and we were unable to do more than to have 200 or 300 copies photographed, and they are the ones you have before you. These are not the normal prints of the accounts, but they are photographic "take-offs," but I can assure you that we have done our best.

A LADY PROPRIETOR: When are you likely to have more radiants for gas fires? It is very awkward not being able to have any heat from such fires.

The GOVERNOR: There again we live in hope. The radiant supply industry is in a very difficult position; they are short of labour. The Government, whom we have approached, have tried to find labour for the factories that make these radiants, but so far they have not been sufficiently successful to get us the number that we require for our consumers. It is hoped that the position will be improved this summer. We have also made enquiries about purchasing these radiants abroad, but so far unsuccessfully, because they are very difficult things to transport. They are very fragile, and that is why so many of them are broken. The outlook is not so good as we should like it to be, but I hope that by next winter the situation will have been improved, if not entirely solved. I can assure you it is constantly in our minds and we are keeping it constantly in the minds of the Government Departments concerned.

THE QUESTIONER: I gathered from an employee at Horseferry Road that some portion of the material is imported from France; is that correct?

THE GOVERNOR: I have no knowledge of the use of a French product. I think the clay that is used is an English clay. There may, of course, be deposits of similar material abroad, but as I said before we have not been successful in getting the radiants from abroad.

Another LADY PROPRIETOR: Could you tell us how nationalization will affect the Ordinary shareholder?

The GOVERNOR: I notice that some of your co-proprietors laughed at your question, but it is not a laughing matter. I am afraid I cannot give you an answer because the Bill which will nationalize the Gas Industry has not yet been published; in fact it has probably not yet been drafted. The nearest you can come to getting an answer to your question, I would suggest, is that you read the Electricity Bill and make up your mind how far that will be a model for the Gas Bill. I am afraid I cannot tell you any more than that.

Mr. CONWAY: I have written a letter to the Secretary. I do not know whether this is the appropriate moment for you to deal with it, or whether it will come up later in the meeting.

The GOVERNOR: I regret that your letter does not appear to be in this building; would you like to give us the gist of it?

Mr. CONWAY: I sent forward some observations regarding the appointment of the Governor. It is not a question of casting any aspersion on the integrity or ability of our Governor, but you come here to-day and ask us to confirm certain appointments, and I am concerned with the method by which selections are made for such appointments. Such appointments should not be made from a narrow circle, but they should be advertised in the trade and technical Press. Could you give us any information as to how the selections are made?

The GOVERNOR: Thank you very much. In answering your question I will ask the Secretary to read the relevant clause, but before he does so I would like to question whether in point of fact the appointment of the Chairman and Governors of great British companies and corporations is advertised in the technical journals.

The SECRETARY then read Section 93 of the Companies Clauses Consolidation Act, 1845, which expressly imposed upon the Directors the duty of appointing a Chairman and Deputy Chairman.

Mr. CONWAY: It does seem peculiar that appointments can be made in this way, whereas even the Prime Minister has to seek nomination and enlist the confidence of the people to support him, and

has to run the gauntlet of the electors. It is time that that clause which the Secretary has read was wiped out, and I hope that under nationalization it will be.

The resolution was then put to the meeting and carried unanimously.

The SECRETARY then read the Minute of the Court of Directors dated Jan. 30, 1947, recommending Dividends as follows:

"Resolved: That it be recommended to the Ordinary General Meeting of the Proprietors to be held on Feb. 20 next that the Accounts as laid before the Court be adopted, and that Dividends as follow for the half-year ending on Dec. 31, 1946, be declared, viz.:

"On the 4% Consolidated Preference Stock at the rate of £4% per annum;

"On the 3¾% Redeemable Preference Stock, 1970, at the rate of £3 15s.% per annum;

"On the 3½% Maximum Stock at the rate of £3 10s.% per annum;

"On the Ordinary Stock £2 10s.% (actual), making a total dividend of £5% for the year 1946;

"All subject to the deduction of income tax."

The GOVERNOR: I beg to move the adoption of that recommendation.

The DEPUTY GOVERNOR: I beg to second it.

The resolution was carried unanimously.

The GOVERNOR: We now come to the election of Directors, and I beg leave to move that Major the Hon. Gwilym Lloyd George, who retires by rotation at this meeting and who offers himself for re-election, be elected a Director of the Company.

The DEPUTY GOVERNOR: I have pleasure in seconding the proposition.

The resolution was carried unanimously.

The GOVERNOR: I now beg leave to move that the Viscount Mersey, who retires by rotation at this meeting and who offers himself for re-election be re-elected a Director of the Company.

The DEPUTY GOVERNOR: I beg to second this motion.

The resolution was carried unanimously.

The GOVERNOR: I now move that Mr. W. K. Hutchison, who retires at this meeting and offers himself for re-election, be re-elected a Director of the Company.

The DEPUTY GOVERNOR: I have pleasure in seconding the motion.

The resolution was carried unanimously.

The GOVERNOR: Mr. Percy Howard Ashworth and Mr. Herbert Edward Ibbs, the Company's Auditors, offer themselves for re-election. This is a matter for the Proprietors, and I will ask someone to move a resolution.

Mr. H. L. MANN: I have much pleasure in proposing the re-election of Mr. Ashworth as an Auditor of this Company.

Mr. P. F. SCARTH: I have much pleasure in seconding the re-election of Mr. Ashworth.

Carried unanimously.

Mr. MANN: May I also have the pleasure of proposing the re-election of Mr. Ibbs as an Auditor of this Company.

Mr. SCARTH: I should also like to second the proposition.

Carried unanimously.

The GOVERNOR: That completes the business of this meeting.

Mr. T. BRAITHWAITE: I feel sure the Proprietors would not like to disperse without expressing their thanks to the Governor (the Chairman of this meeting) and the staff, officers, and all the employees of the Company. I had the privilege last year of moving a similar vote of thanks, and some of you may remember that in welcoming Mr. Michael Milne-Watson back from the Services and complimenting him on his appointment as a Managing Director, I said that knowing what a glutton he was for work I felt sure he would give a good account of himself. We did not anticipate at that time that we should find him to-day in the office of Governor, and we congratulate him on his attaining that position. He did not go straight to the bridge, but he had a lot of experience on the lower deck. He worked in many Departments before he became a member of the Board, and that experience stands him in good stead to-day. We congratulate you on your appointment and we wish you health and strength to carry out efficiently the duties of your high office. With regard to the employees it was a great pleasure to read in the "Co-partners' Magazine" for February the letter from Mr. Willsmer complimenting the men at the works on the way they had worked and what they had accomplished in spite of all difficulties. I think we can apply the same sentiment to the rest of the Company and throughout all the Departments. The employees of the Company have always been loyal and earnest workers and it is a tradition of the Company that the men had a great affection for the Company for which they work. Last year some of us felt there was a little ray of sunshine, but it seems to be blacked out again, and things are more difficult than ever. I believe, however, that the loyalty and the work of our men will bring us safely through another year, and the prosperity of the Company will be assured. I have much pleasure in moving that the best thanks of this meeting be accorded to Mr. Michael Milne-Watson and the staff, officers, and all employees of the Company.

A PROPRIETOR: I am sure we all agree with that resolution, but I would like to add that we appreciate also the fact that the Company have raised the calorific value of the gas.

Mr. BRAITHWAITE: I quite agree with that remark.

Mr. W. BROWN: I have great pleasure in seconding this vote of thanks. The conduct of this Company must be a great anxiety and I think we all owe the Directors a great debt of gratitude for the work they have done and the success which they have attained.

The resolution was carried unanimously.

The GOVERNOR: On behalf of the Directors, staff, and all the employees in the Gas Light and Coke Company I thank you very much indeed. It is a great help to us to hear those extremely generous words of yours, because times are rather difficult now, not at any particular level in the Company, but from top to bottom and from bottom to top. Everybody this winter has been full out, and we are grateful to you for your appreciation and thanks.

The meeting then terminated.

Croydon Gas Company

The One Hundred and Seventy-fifth Ordinary General Meeting of the Croydon Gas Company was held on Feb 21, at Croydon.

Mr. WILLIAM CASH, J.P., F.C.A., the Chairman, said: Ladies and Gentlemen, as you will see from the opening paragraph of the Directors' Report, we have had to meet a large increase of 14.2% in our supply of gas, which has exceeded all previous records and, incidentally, I may mention that in January-February of 1947 further record outputs have been achieved. The fact that we have been able to meet this demand is due to the foresight of the Directors, founded on the wise advice of our technical officers of our works and distribution organizations which has enabled us to meet all demands notwithstanding our difficulties in obtaining plant and materials.

I take this opportunity of expressing to our officers, staff and workpeople the sincere thanks of the Directors for the work they have done to achieve this result and in this acknowledgment I am sure you will concur.

Government's Proposal

Of course, you are well aware that the present Government proposes to nationalize the Gas Industry, but I fail to see how such a plan will result in any benefit to the consumer, and, if these proposals follow the method adopted in the Bills now put forward in other industries, they will inflict on numberless small investors a serious diminution of income. I read with great interest and pleasure the weighty speech made by the Hon. Rupert E. Beckett at the annual meeting of the Westminster Bank, of which he is Chairman. After referring to our immediate difficulties with regard to coal, national credit, and industrial production, he said with regard to nationalization "... I do question the timeliness of so radical and far-reaching a change at the present juncture."

I have on other occasions referred to the policy of this Company with regard to integration and our co-partnership scheme, which is allied with our pension fund, and the welfare of our employees and which has been of mutual benefit to both our stockholders and to them. With reference to our pension fund, you will see in our balance sheet that this now stands at £930,339 and the investments of a cost value of £917,130 have a market value of £1,090,209 and is calculated to reach complete solvency at a very early date. Our own funds show a similar surplus on a market basis.

Price Reduction

In the second paragraph of the Report, the net revenue and allocations for 1946 are dealt with and the balance to be carried forward £128,180 3s. is shown. The Directors have decided to reduce the price of gas as from Jan. 1, 1947, from the 1946 figure of 13.2d. per therm to 12.6d. per therm. The appropriate refunds will be made to consumers as soon as possible.

In conclusion, I should like to remind you that this year is the centenary of the Croydon Gas Company, which was founded in 1847.

Tribute to Mr. Henry Woodall

Reference appears to the retirement of Mr. Henry Woodall, due to ill-health, at Dec. 31 last after 31 years on the Board. His wide experience and high technical knowledge have been of the greatest value to the Company and I regard his retirement as a real personal loss. He has acted as Deputy-Chairman since 1932 and I desire, with my colleagues, to express my regret at his resignation and the hope that, with greater leisure, his health may be restored. Mr. Harold Williams has been elected as Deputy-Chairman, for which position I may say he is most admirably qualified. Other alterations follow as a consequence and are duly set out.

The Report and Accounts were adopted.

The retiring Directors and Auditor were re-elected and the meeting closed after votes of thanks to the employees and to the Directors had been recorded.

GAS STOCKS AND SHARES

The opening of a new account which it was hoped would cover the general resumption of industry and the advent of better weather was marked by a return of optimism in the stock market. While rises in the industrial market were general, emphasis was laid on heavy industry and engineering, shipping, and store shares.

There were few changes in the gas stock market, any effect of the favourable working results reported at the annual meetings of the larger companies being offset by the general industrial situation and the possibility of some form of continued restriction on consumption.

The following were the price changes during the week :

PROVINCIAL EXCHANGES.

Chester United 6 p.c. ord.	118 — 122	− 2	
Preston "A" 10 p.c.	184 — 190	− 1	
Do. "B" 7 p.c.	141 — 146	− 2	

OFFICIAL LIST

Barnet ord. 7 p.c. (x.d.)	168 — 163	Feb. 26	
Cardiff Con. ord.	118 — 123	− 1	
Gas Light & Coke 4 p.c. con. pref.	99 — 102	− 2	
Do. 3 p.c. con. deb.	96 — 98	+ 1	
Imperial Continental Cap.	122 — 127	− 1	
Primitiva Holdings Ltd. ord.	11/6 — 13/6	+ 6d.	
Severn Valley Gas Cor. Ld. ord. (x.d.)	21/ — 23/	Feb. 26	
South Metropolitan ord.	92½ — 95½	− 1½	
South Suburban ord. 5 p.c.	108 — 113	+ 1	

SUPPLEMENTARY LIST

Hampton Court 5 p.c. cons. ord. (x.d.)	105 — 110	Feb. 26

Quotations on the London and Provincial Stock Exhanges

OFFICIAL LIST

Issue. £	When ex-Dividend	Dividends Interest. Amnt. or Rate % Prev. Hf. Yr. Actual.	Last Hf. Yr. Actual.	NAME.	Quotations Feb. 27
1,767,439	Sept. 9	30/-	40/-	Alliance & Dublin Ord.	23/—25/-
905,000	Oct. 28	6d.	6d.	Asscd. Gas & Water U'd'ts Ord.	19/—21/-
389,000	"	7½d.	7½d.	Do. Deferred	19/—21/-
500,000	Sept. 9	2½	2½	Do. 4½ p.c. Red. Cum. Pref.	20/6—22/6
536,000	"	2	2	Do. 4 p.c. Red. Cum. Pref.	20/—22/-
342,000	"	2	2	Do. 4 p.c. Irred. Cum. Pref.	19/6—21/6
561,370	Feb. 26	70/-	70/-	Barnet Ord. 7 p.c.	158—163*
300,000	Nov. 18	1/3½d.	‡ 6¾d.	Bombay, Ltd.	50/—52/-
690,526	Jan. 29	70/-	70/-	Bournemouth 7 p.c. max.	159—164
362,025	Dec. 11	2	2	Do. 4 p.c. Deb.	103—108
659,955	Feb. 26	50/-	57/-	Brighton, &c., 5 p.c. Con.	107—112
855,000	Sept. 30	90/-	70/-	Brit. Gas Light Ord.	115—125
545,000	Dec. 31	2½	2½	Do. 5½ p.c. 'B' Cum. Pref.	110—115
120,000	Dec. 11	2	2	Do. 4 p.c. Red. Deb.	97—102
100,000	Oct. 21	2½	2½	Cape Town, Ltd., 4½ p.c. Cu. Pf.	17/—19/-
626,860	Feb. 12	70/-	80/-	Cardiff Con. Ord.	118—123
24,500	Nov. 18	8¾d.	8¾d.	Colombo 7 p.c. Pref.	23/6—25/6
764,169	Sept. 23	6d.	6d.	Colonial Gas Assn. Ltd. Ord.	15/—20/-
400,000	"	9¾d.	9¾d.	Do. 8 p.c. Pref.	23/—25/-
1,748,090	Feb. 12	40/—†	35/-	Commercial Ord.	81 —86*
620,000	Dec. 11	1½	1½	Do. 3 p.c. Deb.	90—95
286,344	Feb. 12	2½	2½	Do. 5 p.c. Deb.	120—125*
807,560	"	60/-	60/-	Croydon sliding scale	118—123*
644,590	"	50/-	50/-	Do. max. div.	101—106*
620,385	Dec. 31	2½	2½	Do. 5 p.c. Perp. Deb.	120—125
179,500	Feb. 12	50/-	50/-	East Surrey 'B,' 5 p.c.	100—105*
176,461	Dec. 31	2½	2½	Do. 5 p.c. Deb. (Irred.)	120—125
239,135	Nov. 18	6d.	6d.	Gas Consolidation Ord. 'A'	20/—22/-
250,000	"	4½	4½	Do. Ord. 'B'	20/—22/-
250,000	"	2	2	Do. 4 p.c. Red. Cum. Pref.	20/—22/-
19,101,877	Feb. 12	6d.	6d.	Gas Light & Coke Ord.	21/—22/-a
2,600,000	"	35/-	35/-	Do. 3½ p.c. max.	84—89
4,477,106	"	2	2	Do. 4 p.c. Con. Pref.	99—102
2,993,000	Dec. 31	1¾	1¾	Do. 3½ p.c. Red. Pref.	99—102
8,602,497	Dec. 2	1½	1½	Do. 3 p.c. Con. Deb.	96— 98
3,642,770	"	2½	2½	Do. 5 p.c. Red. Deb.	102—107
3,500,030	"	2½	2½	Do. 4½ p.c. Red. Deb.	103—108
700,000	"	1¾	1¾	Do. 3½ Red. Deb.	100—105
5,600,000	May 27	†£10	†£8	Imperial Continental Cap.	122—127
43,340	Jan. 29	1¾	1¾	Do. 3½ p.c. Red. Deb.	98—102
2,167,410	Feb. 12	55/-	55/-	Liverpool Ord.	112—117
231,978	"	50/-	50/-	M.S. Utility 'C' Cons.	102—107
918,657	"	2	2	4 p.c. Cons. Pref.	99—104
675,000	Nov. 11	‡40/-	‡40/-	Montevideo, Ltd.	132—137
368,537	Dec. 11	50/-	50/-	Plymouth & Stonehouse 5 p.c.	110—115
621,667	Feb. 12	72/6	72/6	Portsmouth & Gosport Cons.	140—145
2,387,005	June 24	†9¾d.	†4¾d.	Primitiva Holdings, Ltd. Ord.	11/6—13/6
226,860	Dec. 31	3	3	Do. 6½ p.c. Red. Cum. Pref.	100—105
648,999	Sept. 9	6⅜	6⅜	Severn Val. Gas Cor. Ld. Ord.	21/—23/-
597,972	Feb. 26	2½	2½	Do. 4½ p.c. Cum. Pref.	21/—23/-*
2,528,714	Aug. 26	8¾d.	3¾d.	South East'n Gas Cn. Ld. Ord.	19/—21/-
1,000,000	Feb. 26	2½	2½	Do. 4½ p.c. Red. Cum. Pref.	21/—23/-*
1,068,869	"	2	2	Do. 4 p.c. Irred. Cum. Pref.	19/6—21/6*
6,709,895	Feb. 12	50/-	60/-	South Met. Ord.	92½—95½
1,135,812	"	3	3	Do. 6 p.c. Irred. Pref.	127—132
850,000	"	2	2	Do. 4 p.c. Irred. Pref.	99—104
1,895,445	Dec. 31	1½	1½	Do. 3 p.c. Perp. Deb.	93— 98
1,000,000	Jan. 15	2½	2½	Do. 5 p.c. Red. Deb.	98—103
1,543,795	Jan. 29	50/-	50/-	South Suburban Ord. 5 p.c.	108—113
512,825	"	2½	2½	Do. 5 p.c. Perp. Pref.	106—111
500,000	"	2	2	Do. 4 p.c. Perp. Pref.	99—104
250,000	"	1¾	1¾	Do. 3½ p.c. Red. Pref.	98—103
888,587	Dec. 11	2½	2½	Do. 5 p.c. Perp. Deb.	120—125
750,541	Feb. 12	50/-	50/-	Southampton Ord.	104—109
350,000	"	2¾	2¾	Swansea 5½ p.c. Red. Pref.	102—107
127,288	Sept. 16	83/9	50/-	Swindon Ord.	120—125
1,076,495	Aug. 6	50/-	50/-	Tottenham & District Ord.	108—113
338,555	"	2½ *	2½	Do. 5 p.c. Pref.	107—112
453,380	Dec. 11	2	2	Do. 4 p.c. Perp. Deb.	102—107
1,610,702	Nov. 11	7½d.	6d.	U. Kingdom Gas Cor. Ord.	21/—23/-
1,332,950	Nov. 18	5⅜d.	4½d.	Do. 4½ p.c. 1st Cum. Pref.	20/6—22/6
772,709	"	4½d.	4d.	Do. 4 p.c. 1st Red.Cum.Pref.	20/—22/-
758,235	Dec. 11	5⅜d.	4½d.	Do. 4½ p.c. 2nd Non.Cum.Pf.	19/6—21/6
1,200,000	Sept. 16	1¾	1¾	Do. 3½ p.c. Red. Deb.	103—108
380,608	Aug 19	66/3	66/3	Uxbridge, &c., 5 p.c.	128—133
1,371,138	Feb. 12	50/-	50/-	Wandsworth Consolidated.	107—112
2,525,768	"	2	2	Do. 4 p.c. Pref.	99—104
1,343,964	Dec. 11	2½	2½	Do. 5 p.c. Deb.	121—126
383,745	"	2	2	Do. 4 p.c. Deb.	105—110
558,342	Feb. 12	50/-	50/-	Watford & St. Albans Ord.	108—113

SUPPLEMENTARY LIST

Issue. £	When ex-Dividend.	Dividends Interest. Amt. or Rate % Prev. Hf. Yr. Actual.	Last Hf. Yr. Actual.	NAME.	Quotations Feb. 27
351,685	Dec. 11	2½	2½	Brighton, &c., 5 p.c. Perp. Deb.	125—130
415,250	"	2	2	Bristol Gas Co., 4 p.c. New Deb.	103—108
140,205	Feb. 12	70/-	70/-	Cambridge, &c., 7 p.c. Cons. 'B.'	135—140
295,932	Aug. 19	50/-	50/-	Cheltenham, 5 p.c. Cons. Ord.	104—109
42,500	Dec. 11	2	2	Do. 4 p.c. Perp. Deb.	102—107
150,000	Feb. 12	2	2	Croydon Gas, 4 p.c. Pref. (Irr.)	100—105
130,000	Dec. 31	2	2	Do. 4 p.c. Deb.	102—107
53,220	Feb. 12	3	3	East Surrey, 6 p.c. Cum. Pref.	125—130
198,000	Aug. 19	70/-†	25/-	Eastbourne 'B' 3½ p.c.	90—100
117,425	Feb. 26	—	6¾†	East Wight Cons. 5 p.c.	110—120
156,600	"	50/-	50/-	Hampton C't, 5 p.c. Cons. Ord.	105—110*
18,000	Jan. 15	3½	3½	Malta & Med'n., 7 p.c. Ist Pref.	100—110
50,000	Feb. 12	52/3	52/3	Mid South Util. 'A' Cons. 5 p.c.	105—110
70,380	Dec. 11	2½	2½	Newport (Mon.) 5 p.c. Deb.	120—125
65,000	Aug. 19	2½	2½	North Middlesex 5 p.c. Pref.	107—112
70,000	Sept. 16	2½	2½	Plymouth & Stone., 5 p.c. Deb.	125—130
76,501	Dec. 11	2	2	Reading, 4 p.c. Perp. Deb.	102—107
74,777	Sept. 30	2	2	Romford, 4 p.c. Debs. (Reg.)	98—103
363,575	Jan. 2	2½	2½	Tottenham, 5 p.c. Reg. Red. Mt.	98—101
202,019	Sept. 23	75/-	75/-	Tunbridge Wells, 4 p.c. Scale	137—142
135,257	Dec. 2	2½	2½	Uxbridge &c., 5 p.c. Perp. Deb.	120—125

PROVINCIAL EXCHANGES

					Quotations Feb. 27
804,948	July 29	2½	2½	Bath Cons.	116 — 120
122,577	Aug. 12	4	3	Blyth 5 p.c. Ord.	122 — 124
1,667,250	July 22	2½	2½	Bristol, 5 p.c. max.	114 — 119
120,420	Dec. 11	2	2	Do. 1st 4 p.c. Deb.	100 — 105
415,250	"	2	2	Do. 2nd 4 p.c. Deb.	100 — 105
328,790	"	2½	2½	Do. 5 p.c. Deb.	130 — 132
157,150	Feb. 12	3½	3½	Chester 5 p.c. Ord.	118 — 122
52,500	Dec. 11	2	2	Do. 4 p.c. Cum. Pref.	102 — 104
40,000	"	2	2	Do. 4 p.c. Non. Cum. Pref.	102 — 104
36,430	"	1¾	1¾	Do. 3½ p.c. Deb.	100 — 104
41,890	"	2	2	Do. 4 p.c. Red. Deb.	101 — 104
542,270	Feb. 11	3	4½	Derby Cons.	140 — 150
55,000	Dec. 17	2	2	Do. 4 p.c. Deb.	108 — 113
40,000	Aug. 6	5½	5½	Exeter 10 p.c.	192 — 202*
10,000	Feb. 12	5	5	Great Grimsby 'A' Ord.	195 — 205
6,500	"	5	5	Do. 'B' Ord.	195 — 205
79,000	"	5		Do. 'C' Ord.	185 — 195
587,000	Aug. 26	2½	2	Hartlepool G. & W. Cn. & New	101 — 103
490,681	Dec. 11	1¾	1¾	Liverpool 3½ p.c. Red. Deb. Stk.	98 — 103
401,910	"	2	2	Do. 4 p.c. Red. Deb. Stk.	103 — 105
306,083	Dec. 31	2	2	Do. 4 p.c. Deb.	108 — 113
680,000	Dec. 2	2½	2½	Do. 5 p.c. Red. Stk.	103 — 108
20,000	Dec. 17	2½	2½	Long Eaton 5 p.c. Pref.	9 — 11
80,000	"	2½	2½	Do. 5 p.c. Deb.	117 — 122
2,430,267	Feb. 12	2½	2½	Newcastle and Gateshead Con.	24/6—25/*
682,856	"	2	2	Do. 4 p.c. Pref.	100½—102½*
776,706	Dec. 31	1¾	1¾	Do. 3½ p.c. Deb.	97½— 99½
250,000	"	1¾	1¾	Do. 3½ p.c. Red. Deb.	98 — 100
73,186	Oct. 28	2	2	Do. 4 p.c. Red. Deb.	100½—102½
106,280	Feb. 12	5	5	Preston 'A' 10 p.c.	184 — 190
188,219	"	3½	3½	Do. 'B' 7 p.c.	141 — 146
1,806,339	Aug. 26	3½	3½	Sheffield Cons.	138 — 140
95,000	Dec. 31	2	2	Do. 4 p.c. Deb.	105 — 110
332,351	Jan. 29	3	3	Sunderland 6 p.c. max.	126½—128½
192,150	Feb. 12	2½	2½	Weston-super-Mare Cons.	109 — 113*
64,338	Dec. 11	2	2	Do. 4 p.c. Deb.	100 — 104
33,340	"	3¾	3¾	Do. 7½ p.c. Deb.	155 — 165

a—The quotation is per £1 of Stock. * Ex div. † For year. ‡ Paid free of Income-tax.

Gas Undertakings' Results

Romford Gas Company.—In announcing in our issue of Feb. 12 a final dividend of 2½%, making 5% for the year, we stated in error that this was the same as for 1945. The total dividend for 1945 was, in fact, 5½%.

Wandsworth and District Gas Company.—During 1946 the Company sent out a record quantity of gas to consumers, the sales showing an increase of 12.9% over those of 1945. The balance carried to net revenue account is £280,114, against £366,901. The amount allocated for depreciation of meters and appliances is appreciably lower than for 1945, and there has been transferred £82,275 from the deferred repairs and renewals account to the credit of revenue account. In addition £60,000 has been withdrawn from the special purposes fund and placed to the credit of net revenue account. A final dividend of 5%, the same as for 1945, leaves £203,530 to be carried forward, compared with £166,559 brought in.

Woking District Gas Company.—After providing £5,000 for deferred repairs and renewals, the balance of net revenue for 1946 is £18,570, compared with £18,661 for the previous year. Gas sales set up a new record, being 8.2% over those for 1945, and yielded £128,525, against £118,908. Dividends are maintained at 11% on the "A" Ordinary stock and £7 14s.% on the "B" Ordinary stock, and the carry-forward is increased from £10,221 to £15,055.

Sheffield and District Gas Company.—Gas sold for industrial and domestic purposes in 1946 amounted to 12,640,240,300 cu.ft., an increase of 309,475,700 cu.ft. over 1945. In addition bulk supplies of 982,486,000 cu.ft. were sold to neighbouring gas undertakings, making a total increase of 421,180,700 cu.ft., or 3.1% over the previous year. The balance carried to net revenue account was £438,611, against £418,953. Dividend is maintained at 6½%, and the balance carried forward is £69,132.

Gas Products Prices

The London Market

Mar. 3.

Apart from the changes introduced by the new Coal Tar Products Prices Order (S.R. & O., 1947, No. 177) there are no alterations to report in the prices of Coal Tar Products.

Under the new Order Road Tar prices have been increased by one penny per gall. as compared with the 1943 Order and amendment of 1945.

The new Order also includes considerable increases in the prices for all forms of Naphthalene, so that current prices range as under: Crude Naphthalene from £8 1s. to £12 13s. per ton according to grade for minimum 4-ton lots ex producers' works, bags free; Hot Pressed Naphthalene now costs £15 14s. per ton, bags free, ex producers' works.

Prices for Refined Naphthalene range from £29 2s. per ton for crystal in bags to £35 5s. per ton in 1 cwt. cases: Ball and Flake Naphthalene from £32 6s. 6d. per ton in bags to £38 9s. 6d. per ton in 1 cwt. cases. These prices are for minimum 4 ton lots delivered carriage paid buyers' address.

The Provinces

March 3.

Average prices for gas-works products: Pitch, 75s. per ton; toluole, naked, North, 90's, 2s. 4d. to 2s. 6½d. per gall.; pure, 3s. 2½d. Prices for carbolic acid 60's anthracene, creosote oil (hydrogenation), coal tar oils (timber preservation, &c.) and strained anthracene oil are controlled by Government Orders. Prices for road tar are increased by one penny per gall. by S. R. & O. 1947, 177, under which Order there are also increases in the prices of naphthalene.

Scotland

March 1.

Inquiries continue numerous, particularly for export.

*Refined Tar.** Yield to the distiller is 6d. per gall. ex works, naked. *Creosote Oil.* Timber preserving quality* 5½d. to 6½d. per gall.; Hydrogenation Oil* 5⅝d. per gall.; Low Gravity or Virgin Oil† 7½d. to 7½d. per gall.; Benzol Absorbing Oil 6½d. to 8d. per gall. *Refined Cresylic Acid* is 3s. 6d. to 4s. 6d. per gall. ex works, naked, according to quality. *Crude Naphtha*† 7d. to 8d. per gall. *Solvent Naphtha.** Basic maximum prices delivered in bulk 90/160 grade, 2s. 10d. per gall. and 90/190 Heavy Naphtha, Unrectified, 2s. 0½d. per gall.; Rectified, 2s. 4d. per gall. *Pyridine*† 90/160 grade 15s. per gall., and 90/140 grade 17s. per gall.

* Price controlled. † Uncontrolled

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